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The Use of Radioactive Iodine in the Treatment of Graves' Disease

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SUMMARY

Fifty patients with uncomplicated Graves' disease were treated with radioactive iodine (I_{131}). Twenty-six patients who were followed for one year or longer are the basis of this report. Twenty-five are now euthyroid; only one is not completely well.

The total dose of radioiodine administered varied from 0.5 to 10 millicuries. The average length of time necessary for return to a euthyroid state was from three to four months.

Hypometabolism developed in three patients, and in one the signs and symptoms of myxedema developed. No other complications ensued. One patient who apparently re-

lapsed had complete return to normal after further iodine administration.

The determination of the uptake of radioactive iodine by the thyroid gland is a useful diagnostic procedure in differentiating conditions simulating hyperthyroidism.

Following treatment with radioactive iodine, the thyroid gland becomes smaller, the uptake of iodine by the gland is reduced, and the level of organic iodine in the plasma becomes normal.

In acute thyroiditis, in spite of a high basal metabolic rate, high content of organic iodine in the plasma and other evidences of "hyperthyroidism," the uptake of I_{131} has been very low.

THE USE of radioactive iodine as a therapeutic agent in the treatment of Graves' disease was first reported in 1942 by Hertz and Roberts⁴ and by Hamilton and Lawrence.²

The rationale for the use of the iodine isotope was as follows: The avidity of the thyroid, especially the hyperplastic gland, for iodine has been known for a long time. For over 40 years it had also been known that external x-ray irradiation over the region of the thyroid gland could produce a clinical remission in some patients with Graves'

disease. Radioiodine combines these two properties in that (1) it is selectively taken up by thyroid tissue in the same manner as the naturally occurring element, and (2) it emits beta and gamma rays *in situ*, thus producing maximal internal irradiation at the desired location. The administration of radioactive iodine was found to have the added advantage of being taken up in relatively small amounts by normal glands and in greatly increased amounts by hyperplastic glands, thus giving proportionately greater radiation to the hyperplastic glands of patients with hyperthyroidism. Further, it was soon found that the determination of the uptake of the administered radioiodine by the gland was of diagnostic importance, especially in those cases in which the diagnosis of hyperthyroidism was difficult to determine clinically.

From Cedars of Lebanon Hospital, Los Angeles.

The studies herein reported were endowed by grants from the Blanche May and Beaumont Trust Funds.

Presented as part of a Symposium on Thyroid Diseases before a joint meeting of the Sections on General Surgery, General Medicine, Pathology and Bacteriology, and Radiology, at the 77th Annual Meeting of the California Medical Association, San Francisco, April 11-14, 1948.



Figure 1.—Demonstration of technique for making Geiger counts over the thyroid gland. The paper cylinder aligns the gland with the counter and maintains the standard distance of 29 cm.

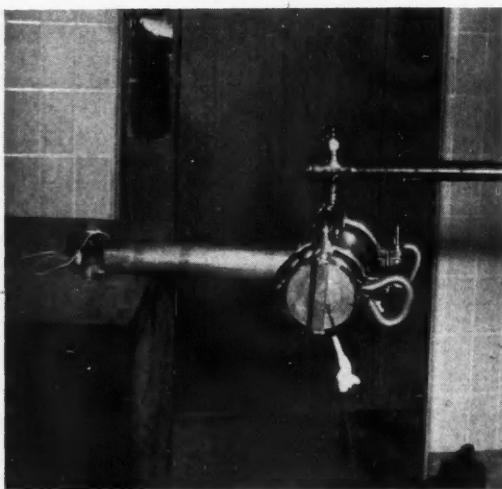


Figure 2.—Method of making comparative count of the standard. Note that paper cylinder still maintains the standard distance and that the diameter and contour of the bottle roughly correspond with a patient's thyroid gland.

TECHNIQUE

Since receiving our first shipment of radioiodine (I_{131}) from the uranium pile at Oak Ridge, Tennessee, in January 1946, we have treated over a hundred patients with thyrotoxicosis, of whom 44 have been followed for more than one year. In brief, the technique is as follows: The patient, previously maintained on a low iodine dietary intake for a period of four to six weeks, is given a small tracer dose of I_{131} , usually 0.5 to 1.0 millicurie. The material looks and tastes like water and is taken orally. Simultaneously, the same dose of radioiodine is placed in a 50 cc. vial and diluted to a total volume of 50 cc. with distilled water. This material serves as a standard for subsequent measurements of radio-

activity. The patient returns for measurement within a 48-hour period. He sits comfortably in front of a shielded Geiger counter, the opening of which is 29 cm. from the thyroid gland (Figure 1), and the radiation emanating from the region of the thyroid gland is measured; this is the neck count. A count over the thigh is made, in order to account for the radioiodine contained in the non-thyroid tissues, and this is subtracted from the neck count, thus giving the amount of I_{131} taken up by the thyroid. The count of the standard is also determined at this time and is taken as 100 per cent (Figure 2); the factor of decay is thus eliminated. The thyroid count divided by the count of the standard gives the percentage uptake of iodine by the thyroid gland.*

In euthyroid individuals, the iodine uptake by the thyroid gland varies from 10 to 30 per cent. The patients with untreated Graves' disease have shown uptakes ranging from 35 to 98 per cent. Experience has justified considerable reliance on this test as a diagnostic aid.

RESULTS

We have divided the patients with thyrotoxicosis into two groups: (1) patients with uncomplicated Graves' disease and (2) hyperthyroid patients with various complications which will be reported elsewhere.⁵ Of the 26 patients without complications who were followed for one year or longer, all but one are now clinically well and the latter is greatly improved. One patient relapsed but again responded after readministration of radioiodine. Two patients returned to a euthyroid state but were left with nodular glands for which surgical removal was advised. Both so far have refused operation.

All patients had elevated plasma organic iodine levels before treatment, the average value being 11.3 micrograms per 100 cc. The average value after treatment was 6.3 micrograms per 100 cc. of plasma. Clinically, these patients have shown the usual criteria for remission: weight gain, return of pulse rate to normal, disappearance of tremor and decrease in size of the thyroid gland, usually with complete disappearance of the enlargement. The estimated size of the thyroid before treatment varied from 25 to 75 gm., averaging 38.7 gm., and after treatment averaged about 20 gm. It was found that a period of three to four months was required for a return to a euthyroid state in these patients. The total dose of I_{131} given ranged from 0.5 to 10 milli-curies, averaging 4.4 millicuries. The uptake of I_{131} before treatment ranged from 31.7 to 100 per cent, with an average of 62.4 per cent, and after treatment ranged from 1.5 to 76.0 per cent, averaging 27.3 per cent. A typical case is presented in Figure 3 and described below:

CASE REPORT

A 31-year-old white female complained of nervousness, fatigue, sweating, diarrhea, pain in legs, and loss of weight. Examination revealed a large thyroid gland with an esti-

*This method of administering I_{131} was originally described by Soley and Miller⁶ who were of valuable assistance in the conduct of this study.

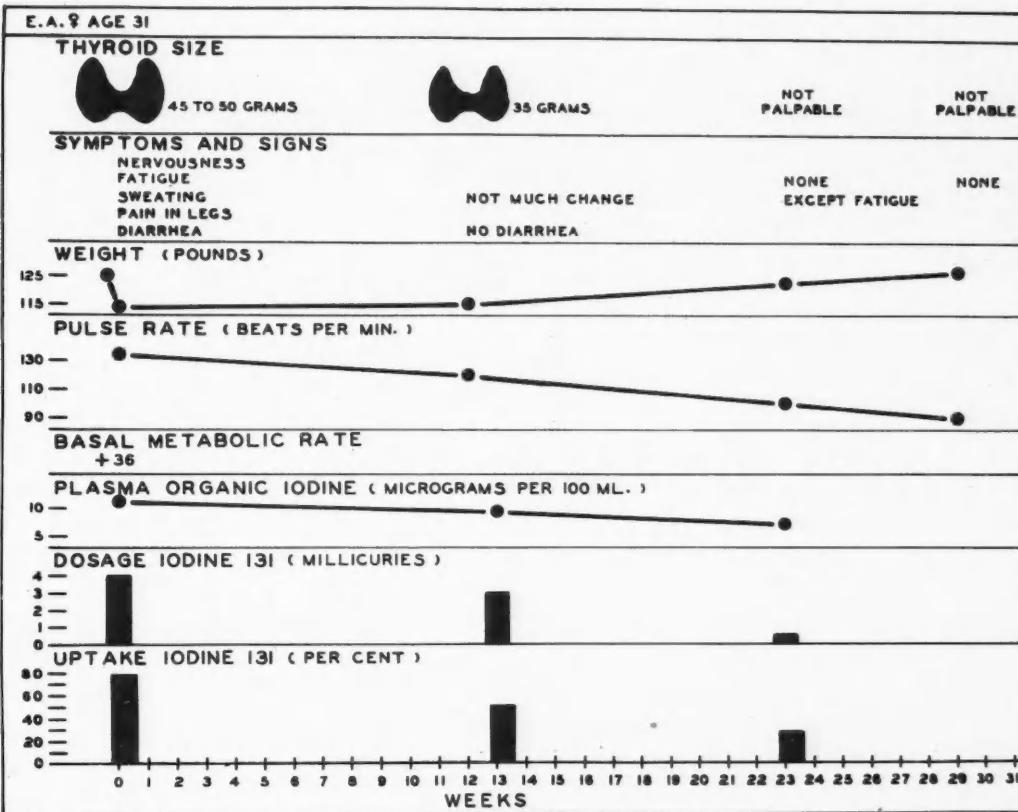


Figure 3.—Representative uncomplicated case of Graves' disease treated with I^{131} . Note correlation of decrease in gland size, increase in weight and well-being, decline of basal metabolic rate and organic iodine in the plasma to normal levels and decreased iodine uptake values as determined by Geiger counts.

mated weight of 45 to 50 gm. The pulse rate was 134, basal metabolic rate plus 36, and plasma organic iodine 11.0 micrograms per 100 cc.

On March 20, 1947, 4.0 millicuries of I^{131} was given, with an uptake by the thyroid gland of 77 per cent. Three months later 3.0 millicuries of I^{131} was given, with an uptake of 50 per cent. In September of 1947 0.5 millicurie was given with an uptake of 27 per cent. Organic iodine in the plasma at this time was 7.0 micrograms per 100 cc. and the thyroid gland was no longer palpable. On final examination in October, 1947, the pulse rate was 90, the patient had gained 12 pounds, and was symptom-free.

Of the 44 patients treated and followed for a year or longer, one developed definite symptoms of myxedema and three developed temporary hypometabolism with return to normal in two to four months. One such case is described in the following case report and in Figure 4. No other complications have occurred to date.

CASE REPORT

A 31-year-old white female complained of dyspnea, palpitation, oligomenorrhea, nervousness, tremor, and loss of weight. Examination revealed an enlarged thyroid gland with an estimated weight of 40 gm. The pulse rate was 126,

the basal metabolic rate plus 54, and plasma organic iodine 12.6 micrograms per 100 cc.

The patient was given 3.0 millicuries of I^{131} in May 1947 with an uptake by the thyroid of 77 per cent of the administered dose. The following August, iodine in the plasma was 4.9 micrograms per 100 cc., the thyroid gland was no longer palpable, the pulse rate was 85, the patient had gained 11 pounds, and was symptom-free.

In October 1947, the patient complained of fatigue, sleepiness, cold, constipation, menorrhagia, and falling hair. At this time the pulse rate was 80, the basal metabolic rate minus 14, the plasma iodine level 1.8 micrograms per 100 cc. Improvement followed the administration of thyroid extract, and when last seen in January 1948 the patient was free of symptoms.

THYROIDITIS

Measurement of the uptake of radioactive iodine by the thyroid gland may be of great value in the diagnosis of those cases of thyroiditis with clinical pictures suggestive of hyperthyroidism. Although the diagnosis is usually fairly simple, in some cases the condition can easily be confused with Graves' disease in that the symptoms and laboratory findings are identical in many respects. For example, patients with thyroiditis may have symptoms of nervousness,

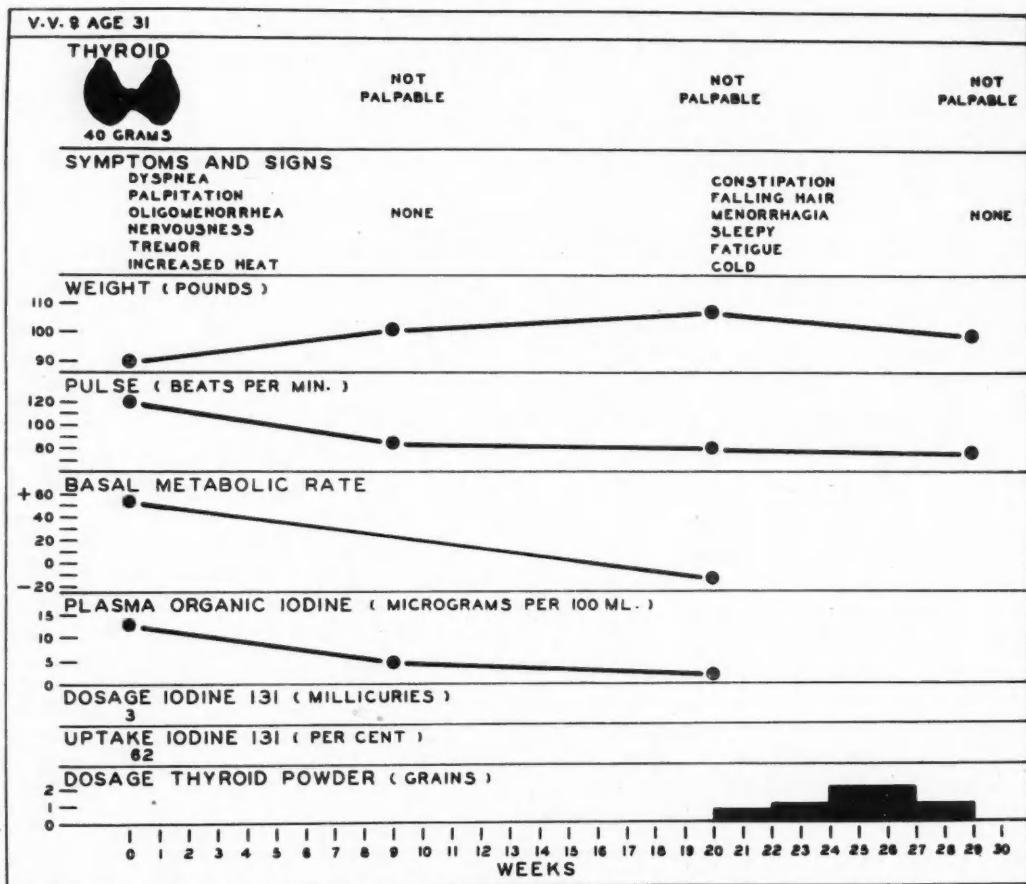


Figure 4.—Illustrative case of temporary hypometabolism resulting from overtreatment with I_{131} . Note that administration of thyroid extract was necessary for only nine weeks, after which time the gland resumed normal function.

tremor, tachycardia and enlargement of the thyroid gland. Also, the basal metabolic rate and serum organic iodine level may be elevated in these patients. It was surprising to find that the thyroid gland in these cases of thyroiditis retained only slight amounts or none of a given dose of radioactive iodine. It was subsequently learned on personal communication with Dr. Mayo Soley of San Francisco that well over a hundred such cases have been studied in his clinic with similar findings. We have seen only four such cases. Since in all patients with thyrotoxicosis the iodine uptake by the thyroid gland is above normal, the measurement of the amount of iodine retained by the thyroid gland in thyroiditis may furnish valuable information relative to the proper diagnosis of this condition. One case is cited below:

CASE REPORT

A 35-year-old white female with illness of one month's duration which had begun acutely with sore throat and fever up to 103° F., was given sulfadiazine without response. There was rapid decline in body weight and the patient com-

plained of extreme nervousness, fatigue to the point of exhaustion, palpitation, sweating, and pain in the region of the heart. Swelling began on the left side of the thyroid gland but disappeared only to appear on the right side. Because asthenia and apprehension were so great that she could not walk without support, the patient was hospitalized. Examination showed a pulse rate of 140, systolic heart murmurs, tremor, warm flushed skin and a firm, swollen thyroid gland which was tender on the right. The basal metabolic rate was plus 32 and the plasma iodine level was 13.9 micrograms per 100 cc. Leukocytes numbered 10,550 and the blood sedimentation rate was 56 mm. in one hour. A diagnosis of thyrotoxicosis with acute onset was made by the patient's physician. The iodine uptake was nil, an observation which was inconsistent with the values obtained in untreated cases of hyperthyroidism. For this reason, the clinical picture was reevaluated and it became apparent that this patient had thyroiditis. Upon treatment with thiouracil, symptoms promptly disappeared.

DISCUSSION

Radioactive iodine appears to be a very effective therapeutic agent in the management of all patients with thyrotoxicosis, including those with complications of various types. It is not recommended in

patients with nodular goiters, and, like any other form of therapy, it has advantages and disadvantages. The advantages are:

1. The absence of any mortality directly due to radioiodine. In contrast, the lowest reported mortality from thyroid operations in the postoperative period is 0.5 per cent³ and in most institutions is probably higher.

2. As opposed to operations also, radioiodine can be administered to the ambulatory patient without loss of time from work. As to a comparison with treatment with antithyroid drugs, the patient does not need repeated blood counts and daily medication, nor is he subjected to the risk of agranulocytosis. Even with propylthiouracil, toxic reactions are reported in 1.6 per cent of the cases.¹

3. Although radiation sickness has been reported, this has occurred only with larger doses employing another radioactive iodine isotope, I_{130} , and we have not observed this untoward reaction with the use of I_{131} in any of our patients.

4. The cost to the patient of treatment with radioactive iodine is much less than the cost of surgical treatment.

5. The administration of radioactive iodine is not followed by such complications as hypoparathyroidism, severe thyroid storms, postoperative pneumonia or shock, agranulocytosis, laryngeal paralysis, unsightly scars, and emotional strain of a major surgical procedure.

6. So far evidence points to a lesser incidence of progressive exophthalmus among patients treated with radioactive iodine than among those operated upon.

The disadvantages are:

1. The correct dosage of radioactive iodine is not accurately known. As a result, in some cases many months of treatment are necessary before remission is achieved. In other cases too much iodine has been administered, with resulting hypothyroidism.

As further experience accumulates it should be possible to gauge more accurately the dosage so that the number of inadequately treated and overly treated cases will be reduced.

2. There are certain unknown dangers from radiation. Although no complications have yet been seen in our cases or reported in the literature, the theoretical possibility exists that some dangers may be present.^{6, 7}

3. Whereas with operation the histologic structure of the gland can be accurately appraised, this is impossible if treatment is with radioactive iodine.

4. A certain amount of technical skill and apparatus is required to administer I_{131} properly and safely.

5. Radioiodine has been used only since 1942, is therefore a relatively new form of treatment and unforeseen difficulties may occur as in the case of any new therapeutic agent.

The authors desire to thank Drs. M. H. Soley and E. R. Miller for invaluable aid in conducting this study.

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The Diagnosis of Intestinal Obstruction in the Newborn

A Review of the Literature with a Report of Eight Additional Cases

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SUMMARY

Because the clinical appearance of newborn infants having intestinal obstruction is disarmingly normal, vomiting is reason for immediate search for the cause. To this end the character of stools and meconium that are passed should be carefully observed, lest valuable time elapse before correct diagnosis is made.

In three cases of volvulus observed by the authors, there was moderate to pronounced distention of the abdomen at birth—a sign which may be helpful in diagnosis.

Roentgenograms are the most helpful diagnostic aid. Since the roentgenographic appearance of the normal infant abdomen differs from that of the adult, interpretations should be made with that in mind. In this connection the absence of gas shadows is significant. Although there are dangers in the use of barium in infants, early diagnosis is so important that use of the substance is justifiable if it will help in correct appraisal.

The treatment is always surgical, and the procedure of choice is primary anastomosis. Proper preoperative and postoperative care and treatment, including maintenance of fluid and electrolyte balance and blood volume, are of great importance.

AMONG the 8,305 live births at Mary's Help Hospital during the past five years, there were seven cases of intestinal obstruction which developed during the first five days of life. Four of these cases were the result of single or multiple atresia of the bowel; and three, of volvulus. This is a considerably higher incidence of atresia than has been reported by others. Webb and Wangensteen¹² reported that atresia occurred in one in every 20,000 births. Besides these seven cases, another, one of congenital atresia, is included. (The baby was delivered elsewhere but treated at Mary's Help Hospital.) Since the mortality in this condition is appallingly high, it was felt that an analysis and review of the eight cases might be profitable (see Table 1). Except in one case of volvulus, the gen-

eral clinical appearance of the patients was strikingly normal, so that in some instances the diagnosis was not suspected until persistent vomiting and failure to pass meconium had occurred.

The most common site of congenital atresia is the lower ileum. In Ladd's⁷ 52 cases, the atresia was located in the ileum in 34; in Davis and Poynter's² series of 392 cases, the ileum was the site in 101. The next most common site is the duodenum. Atresia can also exist in the large bowel; in one series² it was found to occur there in about ten per cent of the cases. Frequently, these intestinal atresias are multiple. Davis and Poynter² in a series of 392 cases found multiple atresias in 15 per cent; Ladd⁷ in his group of 52 cases found five per cent of the patients had multiple atresias. In about ten per cent of the cases other embryological defects are present, the most constant being an imperforate anus.¹¹ Other anomalies frequently associated with this condition are congenital cystic kidneys, malformations of the extremities, and congenital heart disease.

In the three cases of volvulus treated by the authors, the small intestine alone was involved. The rotation was in a clockwise direction, which is usually the case. In each of these cases the bowel was fixed in this position by numerous adhesions to adjacent structures.

DIAGNOSIS

Persistent vomiting in the newborn and failure to pass a normal stool should lead to suspicion of an anomaly of the bowel. Although intestinal obstruction is nearly always due to either congenital atresia or volvulus, vomiting due to other causes, such as intracranial lesions, enteral or parenteral infections, pyloric stenosis, pancreatic achylia, and paralytic ileus must be differentiated. Ordinarily the vomiting of pyloric stenosis commences in infants at the age of two weeks or later, but a few cases have been reported in which the vomiting occurred immediately after birth.⁸ A very few cases of vomiting due to impeded meconium resulting from pancreatic achylia have been reported.⁵ In these cases, congenital stenosis of the pancreatic ducts was responsible. Adynamic or paralytic ileus is exceedingly rare in the newborn, but three cases have been reported in which vomiting was of that origin.⁹ Whether or not the vomitus is bile-stained will depend upon the location of the lesion in relation to the ampulla of Vater. The vomitus usually contains no bile if the occlusion lies above or at the

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level of the ampulla; however, occasionally, bile may seep through a tiny orifice. Although in the infrapyloric occlusions the vomitus contains bile, the presence of this substance may be difficult to recognize. The time of the onset of vomiting after birth has proven to be of little aid in determining the site of obstruction, for with air and digestive juices added to the amniotic fluid swallowed *in utero*,⁶ the infant may start vomiting early even with a low obstruction. For example, in one of the cases of volvulus of the lower jejunum observed by the authors, vomiting began eight hours after birth, whereas in a case of duodenal atresia, vomiting did not occur until the fourth day.

The character of the stool may also be misleading. In four out of five of our cases of atresia the infants passed stools. In the fifth case, in which stools were absent, the patient had a complete rectal atresia associated with a duodenal stenosis. The color of the stools was green in three, and grayish in the fourth, but the consistency and gross appearance in all four cases were mucoid and the amount was scanty. Unfortunately no tests for bile were performed. That bile-tinged meconium can be passed despite complete obstruction below the ampulla of Vater was first reported by Cordes¹ in 1901. The possibility that these atresias develop after the fifth fetal month, when bile is normally present in the intestines, has been suggested by Wangenstein.¹¹ In contrast to those with atresia, none of our patients with volvulus passed stools. A very useful aid in

establishing the diagnosis of intestinal atresia is the Farber test.*⁶

As was stated previously, the clinical appearance of infants with intestinal obstruction is anything but alarming. Most of those observed by the authors appeared to be in good nutritional condition. Even an infant with volvulus and complete gangrene of one bowel segment did not appear unusually ill. Distention in the group of patients with atresias was variable. In general it was not pronounced except in the infant with jejunal atresia. However, distention was a striking feature and was noted at the time of delivery in all the three cases of volvulus. This finding of distention may be a useful aid in differentiating volvulus from congenital atresia. Imperforate anus and rectal atresia, which so commonly complicate obstructions at higher levels, must be definitely ruled out. Digital examination is not entirely satisfactory for this purpose, and attempts to ascertain the patency of the rectum by probing with a catheter also may be unreliable, as the normal folds of the rectum may block the passage of the catheter. In several instances the authors, finding difficulty in passing a catheter, suspected rectal atresia, a suspicion that was quickly dissipated when a thin barium enema was given.

By far the most helpful diagnostic aid is the x-ray examination. Many observers⁴ believe that a plain film of the abdomen gives sufficient information as to the presence of these anomalies. Others⁹ with equal experience resort to the use of thin barium mixtures, both by mouth and rectum, when conclusive evidence cannot be derived from the plain abdominal film; and they feel that the danger of aspiration of the barium mixture has been exag-

TABLE 1.—Eight Case Reports in Tabular Form

Cases	Character and Time of Vomiting	Stools and Character	Abdominal Distention	X-Ray Findings	Surgical Procedure	Surgery Day	Postoperative Progress	Autopsy Findings
CASE 1: Rectal atresia, duodenal stenosis	Bile-stained second day	None	Moderate on second day	Gas with distention in duodenum	Pull-through	Third	Vomiting; expired on seventh post- operative day	Duodenal stenosis
CASE 2: Duodenal atresia	Green, frothy fourth day	Daily from birth, green- yellow	Minimal	Gas with distention in duodenum	Duodenal jejunostomy	Eighth	Survived for 51 days; diarrhea	Severe inanition; anastomosis intact
CASE 3: Multiple atresia	Yellowish 12 hours after birth	None	None	Like a high bowel obstruction	Side-to-side	Fifth	Expired fifth postoperative day; vomiting	
CASE 4: Jejunal atresia	Bile-stained second day	Green mucus fourth day	Marked on second day	Small intestine distended	Side-to-side anastomosis	Sixth	Expired on second post- operative day	Rupture of anastomosis with peritonitis
CASE 5: Volvulus, lower jejunum and upper ileum		None	Moderate at birth	Many distended loops	Freeing adhesions; release of volvulus	Third	Good	
CASE 6: Volvulus, jejunum	Grayish-green 8 hours after birth	None	Moderate at birth	A few distended loops	Resection side-to-side	Third	Expired in 26 hours	Anastomosis intact; duodenum and first part of jejunum dilated
CASE 7: Volvulus, small intestine	Suction since birth	None	Marked	Absent gas shadows	Freeing adhesions; release of volvulus	Third	Stormy; died fourth post- operative day	Peritonitis; partial recurrence of volvulus
CASE 8: Ileal atresia	Green-stained mucus	Green-stained	Moderate	Distended loops	End-to-side	Fourth	Good four days; died seventh post- operative day	Leak at anastomosis; localized peritonitis

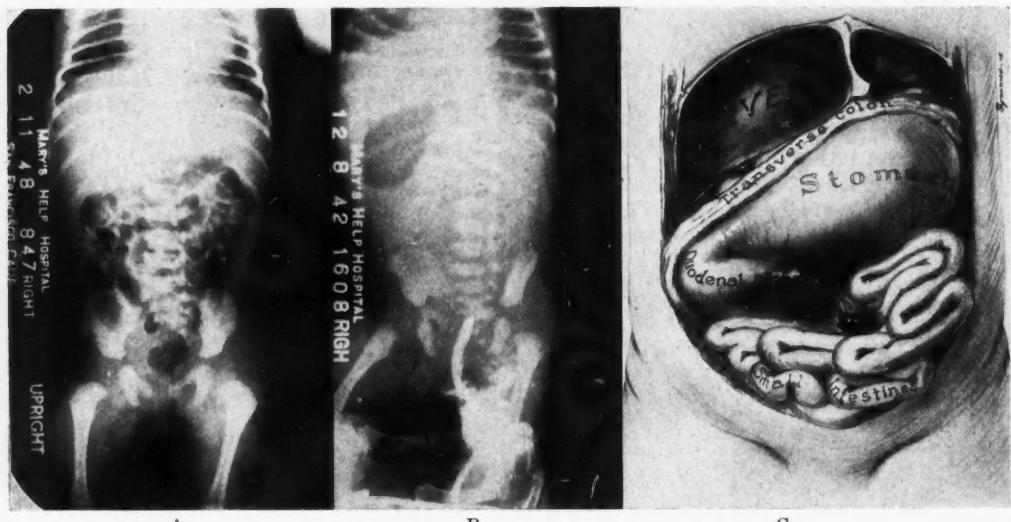


Figure 1. A—Flat plate of abdomen of normal infant. B—Duodenal atresia. C—Duodenal atresia, operative findings.

gerated. The normal x-ray appearance of the infant abdomen differs considerably from that of the adult. In the adult abdomen, in the absence of obstruction, air is present only in the stomach and colon, whereas in the infant (Figure 1-A) air is normally present throughout the small intestines up to the age of two years. Therefore, in the infant, the absence of intestinal gas shadows is suggestive of obstruction.

In the case of duodenal atresia observed by the authors (Figure 1-B and C), the duodenum was considerably distended with gas, while there was no evidence of gas in the remaining small intestine. In a case of jejunal atresia, on the other hand, the small intestine was shown to be distended with gas (Figure 2). A lateral view showed one loop of intestine which was so distended that it was suspected of being large bowel. At operation this was found to be the terminal portion of the distended jejunum. The x-ray film of an infant with ileal atresia (Figure 3-A) revealed the small bowel to be similarly distended but a greater number of distended loops were seen, which naturally would be expected. In a case of multiple atresia the x-ray appearance was that of obstruction high in the small bowel. Actually an atresia was found six inches from the ligament of Treitz.

In volvulus gas may or may not pass into and be visualized in the small intestine. The authors believe that the non-passage of gas is dependent upon an associated malrotation of the midgut with resulting obstruction of the duodenum. The x-ray findings and physical signs in Case 7 (Figure 4-A) led to the erroneous diagnosis of abdominal ascites. Abdominal distention was pronounced and flank dullness was present. These observations, taken together with the absence of gas shadows and the increased diffuse density of the x-ray shadow, led to the erroneous diagnosis. However, when the abdomen was opened a volvulus of the lower ileum was found,

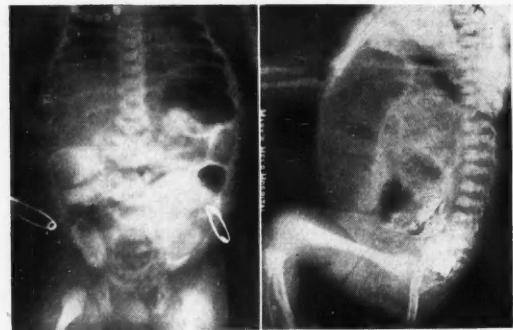


Figure 2.—Jejunal atresia, anterior-posterior and lateral views.

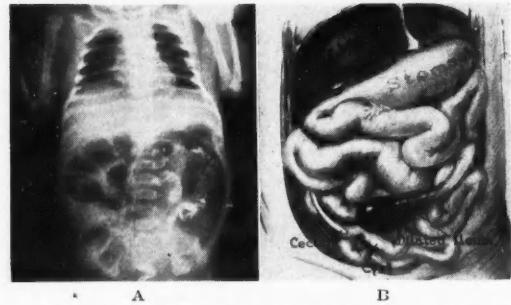


Figure 3. A—Ileal atresia. B—Operative findings in Case 8 (Table 1).

with the twisted loop and bowel proximal to it filled with a thin meconium. There was no free peritoneal fluid. The absence of gas shadows on the x-ray film in this case was due to the small bowel being filled with meconium. In Case 6 (Figure 4-B) the x-ray film showed a few distended loops on the left side

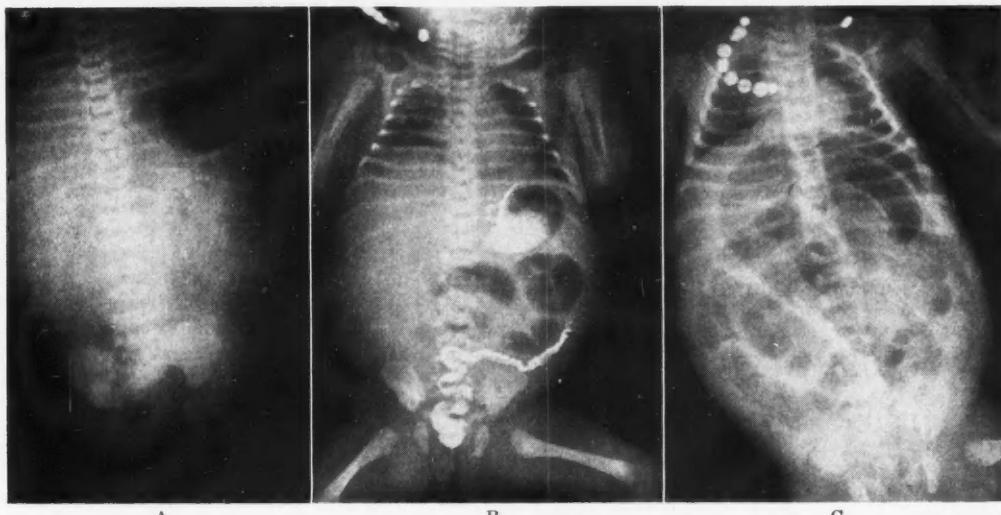


Figure 4. A—Volvulus, showing pronounced abdominal distention and lack of gas. B—Volvulus with distention and moderate amount of gas. C—With distention and tremendous amount of gas.

of the abdomen. In a third case of volvulus, Case 5 (Figure 4-C), in which the patient survived the operation, there was a tremendous amount of gas in many distended loops on the day of birth and on the following day the distention of these loops had increased considerably.

Treatment, obviously surgical, should of course be instituted as early as the condition of the patient permits. The preoperative preparation of the infant is of paramount importance. Restoration of tissue fluids and electrolytes is vital. Transfusions of whole blood are indicated to maintain the normal blood volume. Preoperatively, stomach lavage, using a small-sized rubber catheter, to avoid the aspiration of vomitus during the operative procedure, should be employed. During the operation the catheter is retained to maintain decompression. In atresias the best surgical procedure is considered to be a side-to-side anastomosis of the upper patent segment to the lower patent segment. Intervening segments of bowel in multiple atresias are best left alone, as resection not only is unnecessary but jeopardizes the blood supply of the remaining bowel. Enterostomy should never be considered. In volvulus considerable dissection may be necessary to free and restore the bowel to its normal position.

PROGNOSIS

Until recently the outlook for infants with bowel obstructions of the kind under discussion was exceedingly poor. In a total of 500 cases reported up to 1931 there were only nine patients who survived operation,¹² and before 1942 there were no survivals from operations for multiple atresia.³ Infants with an untreated complete atresia have been known to live as long as three weeks, but death usually occurs within six days after birth. In several instances in which the stenosis was incomplete, the infants have

lived to maturity.³ With earlier diagnosis, improved surgical technique and suture material, and the highly effective chemotherapeutic and antibiotic drugs, there have been many more survivals in the last few years. In 1947 Potts¹⁰ reported five cases of atresia with four survivals, including the first recorded survival following operation for atresia of the transverse colon.

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Hemolytic Anemias

Recent Advances in Diagnosis and Treatment

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SUMMARY

The hemolytic anemias of unknown cause can be separated into two main groups: (1) those produced by a defect in cell structure, which is usually hereditary, and (2) those due to a hemolysin of immune-body type.

The hemolytic anemias associated with hypersensitivity to drugs and disease processes such as leukemia are less well understood and need further investigation.

Splenectomy is the only effective treatment in congenital hemolytic jaundice and in acquired hemolytic anemia; the operation should be carried out promptly in most cases. Transfusion may be used in all varieties of hemolytic disease and is the only effective form of therapy in sickle-cell anemia and paroxysmal nocturnal hemoglobinuria.

ACCELERATED destruction of red blood cells, regardless of causation, is characterized by clinical and laboratory findings which can be listed as follows:

1. The erythrocyte count, hemoglobin and hematocrit fall until the bone marrow, working under increasing stimulus, produces new cells fast enough to keep pace with the accelerated destruction. A balance in the opposing processes may not be reached at a level of hemoglobin high enough to support life.
2. Increased blood formation as evidenced by polychromatophilia, reticulocytosis, and the presence of nucleated red blood cells is the characteristic finding in the peripheral blood.
3. There is an increased formation and excretion of hemoglobin breakdown products in the stool in the form of urobilin and urobilinogen. Some degree of hyperbilirubinemia always results from the additional bilirubin formed, but clinical jaundice is by no means a constant finding in hemolytic anemia. Bile does not appear in the urine, although the amount of urobilinogen in the urine is almost always increased.

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CLASSIFICATION OF THE HEMOLYTIC ANEMIAS

Observations of the longevity of transfused cells and recently developed methods for detecting the presence of hemolytic antibodies now permit the division of the hemolytic anemias into three main groups:

- A. Hemolytic anemia due to abnormality of the cell.
 1. Congenital hemolytic jaundice.
 2. Sickle cell anemia.
 3. Paroxysmal nocturnal hemoglobinuria (hemoglobinemia).
 4. Mediterranean anemia.
- B. Anemias due to an immune body type of hemolysin.
 1. Acquired hemolytic anemia.
 2. Hemolytic disease of the newborn.
 3. Paroxysmal hemoglobinuria.
- C. Hemolytic anemia associated with extrinsic factors or disease states.
 1. Parasitic infections of the red blood cells (malaria, aroya fever).
 2. Action of lytic substances (B. welchii toxin, phenylhydrazine).
 3. Hypersensitivity to drugs (sulfanilamide) or to other substances (favism) or to infectious processes (blackwater fever).
 4. Association with disease states but cause undetermined (lymphoma, leukemia, metastatic cancer).

CONGENITAL HEMOLYTIC JAUNDICE

In most cases the diagnosis of congenital hemolytic jaundice is clear-cut. In addition to the usual signs of accelerated blood destruction, the patient has a past history of subnormal energy and endurance since early childhood, and jaundice and anemia with periodic exacerbations may have been noted. There may be overt signs of hemolytic anemia in other members of the family, or examination of the blood of relatives may show the tendency toward spherocytosis of the erythrocytes and the increase in osmotic fragility that is characteristic of the disease.

The structural defect in the red cell which produces the tendency toward spherocytosis is not known, but Emerson and co-workers¹² have recently demonstrated that the erythrocytes from patients with this disease are particularly susceptible to stasis both in test tube experiments and in the spleen. Stasis produced a prompt increase in spherocytosis and a consequent increase in the osmotic and mechanical fragility which were not observed in

normal cells. Following splenectomy there is a disappearance of the most fragile cells and a return toward normal values for osmotic fragility. Normal cells, given to a patient with congenital hemolytic jaundice, did not share in the abnormal hemolysis and survived a normal length of time in the patient's circulation, as first shown by Dacie and Mollison.⁶ Normal cells also showed no increase in osmotic and mechanical fragility after exposure to the patient's circulation.

The mechanism of the crisis in this hemolytic disease is still obscure. It has always been assumed that the abdominal pain, fever and increase in the anemia were due to a sudden acceleration of blood destruction. Owren²⁵ has recently thrown doubt on the hemolytic explanation of the crisis by demonstrating an aplasia of the marrow and a low reticulocyte count for a period of 10 to 14 days after the crisis. He believes that the rapid development of anemia is due to sudden decrease in blood formation. Others have observed the lack of rapid blood regeneration following the crisis but have attributed the symptoms and rapid increase in anemia to acceleration of the abnormal destruction. It is possible to be misled by the temporary absence of reticulocytes in patients who otherwise appear to have had a crisis of congenital hemolytic jaundice. However, we have observed a hemolytic crisis in a male, age 25, following transfusion, which was not associated with marrow hypoplasia, since the reticulocyte count remained between 10 and 17 per cent. Chart 1 shows that the transfused normal cells did not become involved in the abnormal hemolysis even during the crisis.

There is general agreement that splenectomy is highly effective in the treatment of congenital hemolytic anemia. During the last three years we have studied six individuals with this disorder who have had splenectomy. There has been a prompt and complete clinical remission in all cases and a tendency for a shift toward normal in the curve of hypotonic fragility. It seems clear that the spleen exerts its hemolytic effect by providing the principal site for stasis of the red cells and the development of fragile spherocytes. The time when splenectomy should be performed is largely optional, since, typically, the course is mild and even during and following a crisis the anemia does not threaten the patient's life. On the other hand, there is no point in permitting the patient to remain chronically ill for years when splenectomy would result in cure of anemia.

SICKLE-CELL ANEMIA

Since sickle-cell anemia is said to afflict about 1 per cent of all members of the Negro race, the disease should be suspected whenever anemia is observed in a Negro patient. Diagnosis is important and sometimes difficult, since the symptoms of sickle-cell disease may closely simulate those of rheumatic fever or intra-abdominal emergencies. On the other hand, not all anemias in Negro patients should be assumed to be due to sickle-cell disease, even if sickling is demonstrated, since the incidence of the

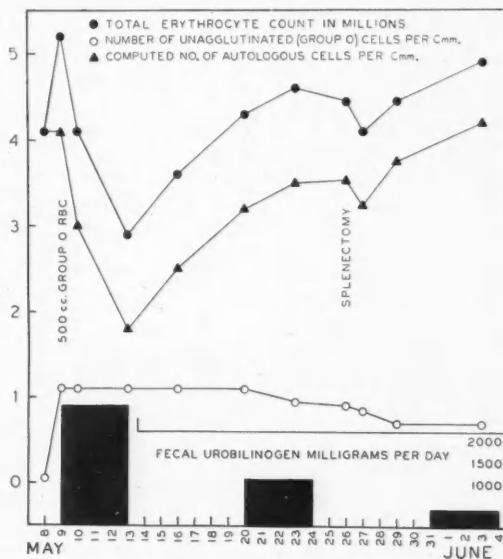


Chart 1.—Congenital hemolytic jaundice. Hemolytic crisis beginning 24 hours after transfusion of 500 cc. of Group O cells. The transfused erythrocytes did not share in the hemolytic process that reduced the erythrocyte count by over two million in three days. Studies of hypotonic fragility before and after the transfusion indicated that the transfused normal cells retained their normal morphologic structure and normal hypotonic fragility.

sickle-cell trait is about 10 per cent.¹⁰ The patient should show the cardinal signs of hemolytic anemia and sickling of the erythrocytes should occur readily in high percentage when exposed to decreased O_2 tension.

The chronic hemolytic anemia and the sudden hemolytic crisis are due to the sickling of erythrocytes in capillaries and venules which produces obstruction to the flow of blood and even thrombosis.²³ Fragmentation of the sickled red cells occurs largely as a result of stasis and increased mechanical fragility which results from the abnormal shape. In demonstrating the sickling the best results are obtained by first producing lowered O_2 tension in capillary circulation by placing a tourniquet on the finger for five minutes. A drop of whole blood is then sealed under a cover slip or a hanging drop preparation. Sickling of 90 to 100 per cent of the cells should take place rapidly under these conditions.

At present little can be offered to the patient with sickle cell disease in the way of sustained therapy for either the chronic forms or the hemolytic crisis. Much can be accomplished with transfusions if the necessary blood, particularly concentrated red cells, is available. Transfused normal cells do not become involved in the hemolytic process and therefore exhibit a normal survival time.¹ Building up the patient's blood count to a normal level with multiple transfusions has the effect of slowing down the rapid blood regeneration and replacing the patient's abnormal cells with normal red cells. When this is accomplished, the signs of rapid hemolysis may diminish abruptly as shown in Chart 2.

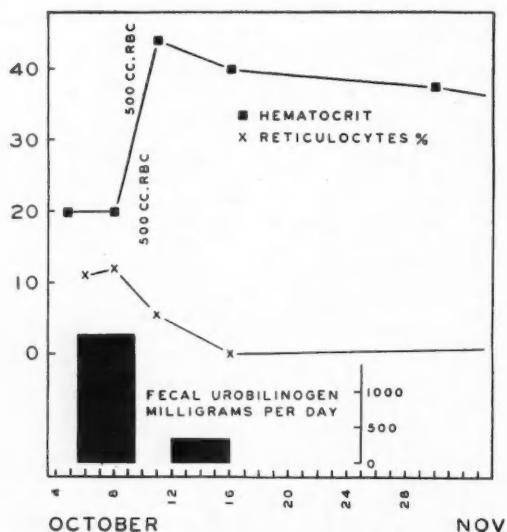


Chart 2.—Sickle cell anemia; demonstrating the marked reduction in rate of hemolysis following multiple red cell transfusions which temporarily eliminated the anemia and reduced the reticulocyte count to normal. The cells susceptible to sickling were 95 per cent before transfusion and 10 per cent during the remission in hemolysis following transfusion.

CASE REPORT

The patient from whose record Chart 2 was drawn was a 16-year-old Negro girl who was known to have had sickle-cell anemia for six years. She had also had migratory pains in the arms and legs, and because of cardiac enlargement and a rough systolic murmur the diagnosis of rheumatic fever had also been entertained. Signs of hemolytic anemia were exhibited and the liver was enlarged but the spleen was not palpable. Hematocrit reading showed packed red cells 21 per cent of the whole blood, the hemoglobin 7.5 gm. per 100 cc., and the red cells 2.15 million per cmm. with 10 per cent reticulocytes. In a sealed preparation, obtained after stasis, 95 per cent of the cells showed sickling. Following the administration of multiple red cell transfusions, the hemoglobin was 14.5 gm. per 100 cc. and red cells were 43 per cent of the whole blood. The rate of blood formation returned to normal, and the fecal urobilinogen fell to 315 mg. per day from 2,000 mg. per day. The patient was no longer icteric and appeared entirely well. Sealed preparations of blood showed only 10 per cent sickling. Transfusions of 500 cc. of red cells every three or four weeks were sufficient to keep circulating hemoglobin close to a normal level.

It is admittedly difficult and expensive to give the amount of blood necessary to alleviate this disease over a long period. However, multiple transfusions sufficient to eliminate anemia appear to be an excellent way for preparing a patient with sickle-cell anemia for operation or delivery. Reduction of the number of cells susceptible to sickling to 10 per cent, as was observed in our patient after transfusion, probably eliminates the possibility of a hemolytic crisis during a surgical procedure or an acute infection.

PAROXYSMAL NOCTURNAL HEMOGLOBINURIA

In this rare variety of chronic anemia the erythrocytes have acquired a susceptibility to destruction

by a hemolytic system which occurs in normal serum. Ham¹⁷ demonstrated that the hemolysis is activated *in vitro* by lowering of the pH of plasma or serum, within physiological limits, by equilibration with CO₂ or acidification with mineral acids. In the patient hemolysis occurs most actively at night in the peripheral circulation so that hemoglobinuria occurs and hemoglobin usually appears in the morning urine. The explanation offered for the nocturnal peak of hemolysis is the lowering of the pH of the blood due to the accumulation of CO₂ during sleep, particularly in certain parts of the circulation.

A patient with this disease shows the cardinal features of chronic hemolytic anemia and in addition usually is alarmed by the passage of red urine, particularly in the morning. There is an absence of spherocytosis and the osmotic fragility of the red cells is normal. A simple, presumptive test for acid hemolysis is described by Hegglin and Maier²⁰ which consists in incubating a sealed tube of clotted blood at 37° C. A positive reaction results from hemolysis of susceptible cells as CO₂ accumulates during incubation. Normal blood and blood from patients with other varieties of hemolytic anemia do not show hemolysis under similar conditions unless, as we have observed, an extreme degree of spherocytosis exists. If the result of the presumptive test is positive, the more elaborate techniques described by Ham¹⁷ should be carried out.

Active treatment of the disease is considered futile, since the patients do not respond to splenectomy. Administration of alkali, such as sodium bicarbonate, only temporarily delays hemolysis. However, as in sickle-cell anemia, transfusions are of considerable benefit, since the transfused cells do not become involved in the hemolytic process and exhibit a normal longevity.⁷ For one patient with this disease who has been under observation for a number of years, regularly administered transfusions have been very beneficial:

CASE REPORT

The patient, a 53-year-old woman of Portuguese extraction, was first admitted to hospital in August, 1945, with severe anemia of undetermined cause. She had been found to be anemic about one year previously but there was no response to iron or liver therapy. Jaundice and hematuria had not been noted. The patient was obese and pale, but icterus of sclerae was not observed. The spleen was not felt. Packed red cells made up only 16 per cent of the whole blood, hemoglobin was 4.8 gm. per 100 cc., and erythrocytes numbered 1.7 million with 9 per cent reticulocytes. Leukocyte counts averaged 3,000 with a normal differential. The icteric index was 10 units. There was no spherocytosis or increase in hypotonic fragility, and sickling was absent.

Incubation of a sealed tube of the patient's blood at 37° C. overnight turned the serum surrounding the clot dark red with hemolysis. Red cells and serum were prepared from normal blood and the patient's blood by defibrillation with glass beads. Ten per cent suspensions of cells in serum were mixed and equilibrated with air or CO₂ and then incubated for one-half hour at 37° C. Following centrifugation the supernatant serum was inspected for hemolysis.

Cells	Serum	CO ₂ or Air	Hemolysis
1 Patient's	Patient's	CO ₂	+++
2 Patient's	Normal	CO ₂	+++
3 Patient's	Patient's	Air	0
4 Patient's	Normal	Air	0
5 Patient's	Inactivated	CO ₂	+
6 Normal	Patient's	CO ₂	0
7 Normal	Normal	CO ₂	0

These observations have been repeated on many occasions with closely similar results. Samples of blood collected at 2 a.m. have shown free hemoglobin in the plasma and serum although hemoglobinuria did not follow in the morning. Hemosiderin has been present in the urine on all examinations.

Studies of the excretion of fecal urobilinogen during 20 days of observation showed a fairly constant rate of 600 to 800 mg. per day. The patient was then given a transfusion of 500 cc. of concentrated red cells which did not produce immediate reaction, but two days later the temperature rose to 39.1° and hemoglobin appeared in the urine for the first and only time. In the succeeding two days two more transfusions were given, one of 500 and the other of 700 cc. of red cells, without reaction or recurrence of hemoglobinuria.

Following the third transfusion red cells were 45 per cent of the blood volume, and the red cell count and hemoglobin were normal. The reticulocytes fell to 1 per cent and the rate of excretion of urobilinogen in the feces dropped to a range close to normal during the first three weeks. With pallor gone the patient appeared well and said she felt well.

At the end of 45 days the red cell volume had dropped to 31 per cent of the whole blood and some of the pallor had returned. However, transfusions of concentrated cells given in two days restored the blood to normal. The patient has continued to receive multiple transfusions at intervals of 35 to 70 days and has felt well and been ambulatory. During the past year there has been some indication of general improvement in that the rate of fall of the hematocrit is slower now following transfusion than during the first year of treatment. Following the last transfusion it has been demonstrated by technique of differential agglutination that the transfused erythrocytes survived a normal length of time in the patient's circulation, as is shown by line A in Chart 3.

The frequency and severity of hemolytic episodes following transfusion has been noted by many observers. The severity of the reaction probably depends in large part on the number of susceptible cells in the patient's circulation at the time transfusion somehow sets off the increased hemolysis. It would appear that once a hemolytic episode has followed a transfusion, additional blood may be given with little danger of precipitating a similar reaction. The remission in hemolytic activity after transfusion has been noted previously by others. Once transfusions are started it may be possible to keep the hemolytic episodes under control by giving blood at regular intervals, thus preventing the building up of a high percentage of the patient's own cells in the circulation.

In the case reported, the absence of hemoglobinuria except in the one instance following transfusion does not throw doubt on the diagnosis since susceptibility of the patient's cells to acid hemolysis has been consistently demonstrated. Patients with this disease who show morning hemoglobinuria only occasionally have been described.¹⁸ The absence of hemoglobinuria in the presence of hemoglobinemia

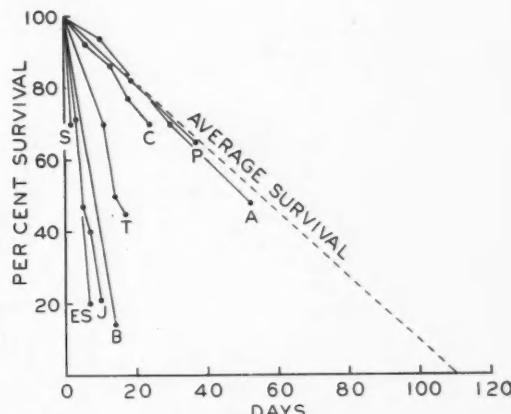


Chart 3.—Measurement of survival time of transfused erythrocytes in various types of hemolytic anemia. Lines labeled S, T, J, B, and ES are representative of acquired hemolytic anemia and show a sharp reduction in the survival time of transfused erythrocytes. Line C (congenital hemolytic jaundice), line P (Cooley's Mediterranean anemia), and line A (paroxysmal nocturnal hemoglobinuria), all show a survival time of transfused cells within the normal range during the period of observation.

simply means that the concentration of hemoglobin in the plasma does not reach a sufficient level to exceed the reabsorptive capacity of the renal tubules. Ham has suggested that the name "paroxysmal nocturnal hemoglobinemia" is preferable to "paroxysmal nocturnal hemoglobinuria." The case reported in preceding paragraphs represents a point in favor of the former name.

MEDITERRANEAN ANEMIA

It is now well recognized that Mediterranean anemia exists in varying degrees of severity and that the milder forms are compatible with adult life.⁸ Many patients show evidence of an abnormal hemolytic process with hyperbilirubinemia, increased fecal urobilinogen, and reticulocytosis and nucleated red cells in the peripheral blood. However, other features of the disease may be present in the absence of much evidence of abnormal hemolysis. The most constant characteristics are hypochromia with a low mean corpuscular hemoglobin concentration which does not respond to iron, the decreased cell thickness with increased resistance to hemolysis in hypotonic saline, and the target cell or oval cell deformity of the erythrocytes in a stained smear. The disorder appears to be a hereditary defect in red cell formation, particularly as pertains to hemoglobin synthesis.

Since the disease in general appears to be due to a defect in the red cell, the abnormal hemolysis is probably on that basis. Transfused normal cells should exhibit a normal survival time in patients with this disease. We have observed this to be true in one case as shown in Chart 3. So far hemolytic antibodies have not been observed by any other method of study. Aside from repeated transfusions²¹ there appears to be little available in the way of

therapy. Splenectomy may lessen the severity of the disease and diminish the frequency of transfusions in some cases.

ACQUIRED HEMOLYTIC ANEMIA

Acquired hemolytic anemia has been recognized as a separate entity on the basis of clinical observations since the first of the century. It is now possible to use laboratory methods as well as clinical evidence to distinguish between acquired hemolytic anemia and other types of hemolytic disorders, so that the syndrome may now be differentiated by the following characteristics:

1. No familial incidence has been noted in our cases nor in series reported by others.
2. The disease may begin in any period of life, and there is usually nothing in the history suggestive of previous hemolytic episodes.
3. The course is acute or subacute in contrast to the usual mild course of congenital hemolytic jaundice.
4. Spherocytosis and consequent increased osmotic fragility may be present, particularly in the severe cases, but it is not a constant feature of the disease.
5. Transfused normal cells become involved in the hemolytic process and are eliminated from the circulation at an accelerated rate.^{3, 4, 6, 22}
6. Erythrocytes from patients with acquired hemolytic anemia consistently show evidence of sensitization by an immune body hemolysin,^{2, 13, 27} by the Coombs technique.⁵ Other observers report consistent demonstration of erythrocyte antibody in the serum.²⁴
7. The response to splenectomy is so variable as to constitute a feature of the disease.

Twelve patients with acquired hemolytic anemia studied at Stanford University Hospital during the past six years have exhibited great variation in severity of the hemolytic process. In some cases the disease process has been violent with severe anemia, leukocytosis, fever, and prostration. In others the condition has been insidious in onset and the symptoms have come from the gradual development of moderately severe anemia. The patients have varied in age from 16 to 78 and only two of the 12 were men. In seven of the 12 patients there was no evidence of associated infection or neoplastic disease in the background and no history of drug ingestion or exposure to toxic substances. Of the remaining five, two patients, the youngest in the group, had a preceding or concomitant attack of virus pneumonitis. A third patient was receiving gold therapy for arthritis at the time of the onset of the hemolytic disease but there is no direct proof of etiological relationship. The oldest patient in the group, a man aged 78, was found to have hemolytic anemia in association with chronic lymphatic leukemia. One woman, aged 41, was in the third trimester of pregnancy at the time of onset of thrombocytopenia and hemolytic anemia. In her case the thrombocytopenia continued to overshadow the hemolytic disorder in severity.

Five of the patients did not show clinical jaundice when first seen. Consequently the diagnosis of hemolytic anemia was not entertained until blood studies and measurement of bile pigment excretion proved the hemolytic origin of the anemia. The excretion of urobilinogen in the feces was determined in seven patients, including those who did not exhibit clinical jaundice, and varied from 600 to 2,400 mg. per day. In all patients the icteric index and the plasma bilirubin were at least slightly above the normal level even though jaundice was not apparent. All the patients showed reticulocytosis which varied from 7 per cent to 30 per cent on the first examination. Nucleated red cells were found in the peripheral blood in every case, and sternal aspiration in 11 patients showed hyperplasia of the erythroid elements. The fragility of the erythrocytes in hypotonic saline was definitely increased in seven, but was within normal limits in five patients.

Leukocytosis with counts of 12,000 to 40,000 with polymorphonuclear leukocytosis was encountered in six patients, who in general had the most severe disease. On the other hand, leukopenia with counts varying from 1,700 to 5,000 was found in five patients. Thrombocytopenia was also common, and platelet counts of 60,000 or under were encountered in five patients, but only one patient exhibited a bleeding tendency.

Studies of the longevity of transfused cells by a modification of the Ashbey technique of differential agglutinations were made in five of the 12 patients. In all five the transfused normal cells were eliminated from the patients' circulation at an abnormally rapid rate, as is shown in Chart 3. In four other patients repeated multiple transfusions of red cells had a transitory effect so that it could be ascertained by simple calculation that the transfused red cells were involved in the hemolytic process. In one patient it was demonstrated that the transfused cells showed an increased hypotonic fragility 24 hours after transfusion.

Since the advent of the Coombs test, the nine patients in the group studied with this technique have all shown evidence of sensitization of the circulating red cells by an immune body. A technique for quantitating the amount of antibody on the cell has been devised and there is evidence that the activity of the hemolytic process before and after splenectomy is correlated with the amount of antibody on the cell surface.

The treatment of acquired hemolytic anemia is not as clear-cut as in the previous varieties discussed. In general the course of the disease is usually progressive and shows a tendency to increase in severity. Spontaneous cure of the hemolytic disease was observed in only one instance in a 16-year-old girl with associated pneumonitis. In her case one transfusion did not affect the course of the disease, and the hemoglobin remained at a level of 30 per cent for several days until the pneumonic process subsided. This was followed by a complete and apparently permanent remission in the hemo-

lytic process. A temporary partial remission was observed in one patient who a few weeks later relapsed and underwent splenectomy without improvement. One patient died without splenectomy because of the extreme severity of the disease, and one patient is now under observation and splenectomy has not been performed because of advanced age and complicating lymphatic leukemia.

Nine patients have undergone splenectomy with variable results typical of this type of hemolytic anemia. These patients may be divided into three groups according to their course since splenectomy:

1. Four have exhibited complete clinical remission for periods of from 18 to 24 months. One patient of this group died of metastatic carcinoma without recurrence of the hemolytic process. The patient exhibiting thrombocytopenia and hemolytic anemia during the sixth month of pregnancy showed little change following removal of the spleen although the bleeding tendency lessened. There was a gradual relief of anemia and thrombocytopenia following delivery.

2. One patient had a remission of 18 months following splenectomy but died in relapse.

3. In four, splenectomy was probably of some temporary or lasting value, but the hemolytic process has continued actively. One patient died of anemia and two died of infectious processes not connected with the hemolytic anemia. One patient is alive and ambulatory with chronic hemolytic anemia six years after splenectomy. In her case hemoglobin varies from 45 to 60 per cent.

Methods designed to quantitate the amount of anti-erythrocyte antibody on the surface of the red blood cell indicate that remission following splenectomy is associated with reduction of the quantity of antibody on the cell surface.¹⁴ The reduction occurs immediately after splenectomy, indicating that the spleen is the major source of antibody. Relapse or continuation of the accelerated process is associated with amounts of antibody on the cell comparable to presplenectomy values. Evidently other tissues have assumed a larger role in the formation of the erythrocyte antibody in those cases in which there is either no improvement or relapse. Autopsy examination of two patients who died in relapse failed to reveal an accessory spleen.

The important practical question to be answered is the effect of early splenectomy, as opposed to delay, in the production of complete remission. Our series is small, but there is evidence that in general those patients in whom the disease was mild and who underwent splenectomy promptly after the diagnosis was made, did the best. On the other hand, patients on whom the operation was delayed because of uncertainty and because of the severity of the disease did less well after operation. It is our impression that the severity of the disease has more to do with remission than the time of splenectomy.

We have observed no general contraindications to transfusions in this group of patients and the majority received multiple red cell transfusions without incident during their hospital course. One patient

is said to have had a hemolytic transfusion reaction before entering this hospital, which is probable, since hemoglobinemia was present on entry some 24 hours later. Subsequent multiple transfusions were well tolerated although the patient finally died of anemia and renal failure.

It should be kept in mind that these patients may exhibit atypical isoantibodies in addition to the hemolytic antibody causing the disease. They are likely to have cold agglutinins which add confusion to the determination of compatibility of blood. As a consequence it is recommended that in addition to the usual precautions of grouping and Rh typing, the cross-matching of blood be performed with a 2 per cent serum suspension of the donor's cells and a drop of the recipient's serum undiluted with saline. The mixture should be incubated at 37° C. for one-half hour and centrifuged in a warmed cup for one minute before a reading is made. This warm serum cross-match will serve to detect the presence of atypical isoantibodies and will eliminate false indications of incompatibilities due to cold agglutinins. In addition to these steps Hattersley¹⁵ recommends centrifugation of the suspension immediately after mixing to detect the presence of atypical blocking antibodies which may not produce agglutination after incubation because of the zoning phenomenon. If the sedimented cells show no agglutination, incubation and re centrifugation are then carried out.

Multiple transfusions of red cell concentrate have proved to be of great value in preparing patients with acquired hemolytic anemia for splenectomy. In several cases the anemic state was temporarily eliminated in 24 to 36 hours by multiple transfusions. On the other hand, it should be kept in mind that transfusions have a very transitory effect because of the accelerated destruction of all red cells in the patient's circulation and that transfusions are not a substitute for splenectomy which as yet offers the only hope of a real remission in the majority of patients.

HEMOLYTIC DISEASE OF THE NEWBORN

A detailed discussion of hemolytic disease of the newborn is beyond the scope of this report, since it presents a special problem in the field. The infant is exposed to a hemolytic antibody of maternal origin *in utero* and the chief problem in therapy is the hemolytic anemia which continues after the removal of the infant from the source of antibody. Continued destruction of red cells for days or weeks following birth indicates that the antibody present is probably not neutralized or destroyed completely by hemolysis of the sensitized cells. It is possible that hemolysis may release the antibody to damage more erythrocytes and perhaps other tissues as well.

Recent advances in laboratory technique have made it possible to predict the occurrence of hemolytic disease prior to birth so that the necessary diagnostic and therapeutic measures can be arranged in advance of delivery. Experience to date with the replacement transfusion technique has been encouraging and so far parallels that reported by

Diamond.⁹ The replacement transfusion provides the advantage of removing most of the destructive antibodies at the same time that the anemia is treated. In our experience only one replacement transfusion procedure has been needed in the treatment of severely anemic babies, whereas six to twelve separate procedures were required with the multiple small transfusion technique.

PAROXYSMAL (COLD) HEMOGLOBINURIA

The auto-antibody responsible for the hemolysis in paroxysmal (cold) hemoglobinuria requires a temperature below the average body range before it unites with erythrocytes. Therefore, although it can be demonstrated in the patient's serum between paroxysms of hemolysis, the titer tends to diminish or disappear following an attack. These well-known observations provide contrast with the findings in acquired hemolytic anemia where the immune body unites with erythrocytes at body temperature and the greatest part of the antibody is found on the surface of the erythrocyte at all times.

Paroxysmal hemoglobinuria should be suspected whenever the evidence of hemolysis, particularly hemoglobinuria, accompanies or follows chilling. The classical Donnath-Landsteiner technique of demonstrating the antibody in the patient's serum is too well-known to need description here.

HEMOLYTIC ANEMIAS ASSOCIATED WITH EXTRINSIC FACTOR

It is not the purpose of this report to discuss hemolytic phenomena produced by extrinsic agents. The cause of hemolytic anemias associated with parasitic infections and lytic substances that destroy the red cell is obvious and requires no further comment here. The mechanism of hemolysis in anemias which appear to be due to hypersensitivity is obscure, and further study with the transfusion and immunological techniques previously described is needed. The subject of the so-called symptomatic hemolytic anemias has recently been reviewed by Stats and co-workers;²⁰ but the underlying mechanism of hemolysis, whether cell defect, hemolysin or excessive stasis in the spleen and phagocytosis, has not been defined. We have studied one patient with hemolytic anemia associated with lymphatic leukemia who showed the usual evidence of hemolysis of an immune-body type and the rapid destruction of transfused cells. Whether or not an immune body will be a constant finding in this group of patients remains to be seen.

If treatment of symptomatic hemolytic anemia is required, therapy directed at the underlying disease should be attempted first. If the hemolytic process threatens the patient's life, splenectomy, if feasible, may produce relief. In connection with the association of hemolytic disease and malignancy, it is worth remembering that ovarian tumor has been found in the background in patients with hemolytic anemia and that the hemolytic process has subsided following removal of the tumor.

DISCUSSION

Although some light has been thrown on the subject of hemolytic anemias, it is obvious that many new problems have been created and many old questions remain to be answered. The classification presented is certainly tentative and is not complete even at this time. For instance, Haden¹⁶ has recently described members of two families with familial hemolytic anemia without spherocytosis, which represents a new entity. On the other hand, Young and Lawrence²⁰ and Evans¹⁵ have described single patients with hemolytic anemias that did not appear to be congenital or familial and could therefore be referred to as "acquired," in which hemolytic antibodies were evidently absent, since transfused cells were not involved in the hemolytic process. The defect therefore appeared to be in the red cell, yet the patients did not fit into any of the known categories of hemolytic anemia due to cell defect.

The structural defect which allows for spherocytosis, sickling, and susceptibility to acid hemolysis is as yet buried in the unknown regions of the physicochemical anatomy of the red cell. Watson²¹ has recently reported extensive studies of sickleemia in the newborn of mothers with sickleemia, which show a low percentage of cells susceptible to sickling at birth as compared to four months after birth when the fetal red cells have been replaced by extrauterine cells. The gradual increase in susceptibility to sickling during the first four months parallels the replacement of fetal hemoglobin by that formed following birth. Since qualitative differences such as resistance to alkaline denaturation have been demonstrated to exist between fetal and extra-uterine hemoglobin, the correlation with susceptibility to sickling is highly significant.

The demonstration of auto-antibodies in the great majority of patients with acquired hemolytic anemia provides considerable material for speculation. The antibody is really a tissue antibody since erythrocytes from other individuals are apparently destroyed as rapidly *in vivo* as the native cells. The concept of auto-antibodies is not new but the existence of this aberrant immunological activity has not been so clearly and consistently demonstrated in other diseases suspected of being due to similar cause. The acquired hemolytic anemias provide an excellent opportunity for observing the course of disease due to auto-antibodies, the effect of splenectomy, and other possible therapeutic measures. Observations made in this disease have a broad application in the field of medicine, particularly in those disease states of unknown cause, such as glomerulonephritis, rheumatic fever, rheumatoid arthritis, and other syndromes grouped under the general heading of the hypersensitive states.

The occurrence of idiopathic thrombocytopenia and hemolytic anemia of the acquired type in the same individual suggests that both diseases are due to the same process. Thrombocytopenia and leukopenia have been observed in almost 50 per cent of the cases of acquired hemolytic anemia observed by

the authors. Some of the patients described by Doan and Wright¹¹ under the heading of primary splenic panhematopenia have shown evidence of a hemolytic process. It seems unlikely that the hemolytic anemia in such cases is due to an erythrocyte antibody while the thrombocytopenia and leukopenia are due to suppression of marrow production by some hypothetical hormonal agent or to excessive phagocytosis in the spleen or reticuloendothelial tissue. The role of auto-antibodies in thrombocytopenia needs re-investigation with improved immunological technique.

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Median Nerve Injuries in Fractures in the Region of the Wrist

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SUMMARY

Injuries of the median nerve in fractures in the region of the wrist are not uncommon.

Median nerve palsy is frequently the result of immobilizing the wrist in acute palmar flexion.

Good reduction and immobilization of the wrist in neutral position are the best means of preventing median nerve injury.

In any fracture in the region of the wrist, the status of the median, ulnar, and radial nerves should be examined before and after reduction of the fracture.

The majority of patients with median nerve neuritis recover completely without operation. In some cases, the duration of the sympathetic nerve paralysis is unpredictable.

Where neurological symptoms persist, neurolysis with or without sectioning of the transverse carpal ligament will improve the neurological status of the patient.

ALTHOUGH median nerve injuries are not infrequent complications in fractures of the wrist, standard texts on fractures either do not mention injuries of this kind or consider them to be extremely rare. For example, Key and Conwell³ in discussing complications of fractures of the distal third of the radius, state that "very rarely with marked displacement the median nerve may be injured by the lower end of the upper fragment." However, Abbott and Saunders¹ felt that this complication is not so rare and should warrant more than a passing reference in a discussion of fractures of the wrist.

Since the first report of a case by Gensoul in 1836, 40 cases have been reported in medical literature. Within the last year and a half in private practice, the author has observed four patients with median nerve injuries and one with ulnar nerve neuritis in association with fractures in the region of the wrist.

REVIEW OF LITERATURE

In 1836, Gensoul reported the case of a young girl who died of tetanus following fracture of a forearm. At autopsy the median nerve was found to be

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caught between the ends of the fractured radius. Paget in 1854 cited a case in which the median nerve was involved in the excessive formation of callus around a fracture of the lower end of the radius. De Rouville in 1905 described a pseudo-neuroma, three times normal size, of the nerve in the case of a 53-year-old man who developed a late median nerve paralysis following fracture of the radius. Blecher in 1908 collected reports of nine cases from the French literature and added one of his own. Kirchheim in 1910 collected reports of four more cases from the German literature. A basic review of the subject was made by Abbott and Saunders in 1933.¹ They presented reports of eight new cases. In 1945 Zachary reported two cases of compression of the median nerve within the carpal tunnel associated with old bony derangements at the wrist.⁵ Eight similar cases were reported by Cannon and Love in 1946.²

THE ANATOMY OF THE MEDIAN NERVE AT THE WRIST

Abbott and Saunders gave the following description of the regional anatomy involved in this discussion:

The anatomical considerations of the median nerve at the wrist joint are of particular importance in explaining the special features and types of involvement which are met with when this nerve is injured in Colles' fractures. The nerve is not directly related to the volar surface of the radius but is separated from it by the fleshy mass of the pronator quadratus muscle and by the tendon of the flexor pollicis longus muscle. The pronator quadratus muscle serves to protect the nerve from fragments of this bone. At the wrist joint the nerve becomes superficial and lies on the ulnar side of the tendon of the flexor carpi radialis; behind or on the radial side of the palmaris longus. Just before passing into the hand, deep to the transverse carpal ligament, it often assumes such a superficial position as to be readily palpable. At this point the nerve gives off its palmar cutaneous branch which supplies the proximal part of the palm of the hand with sensation. Passing deep to the transverse carpal ligament and over-lapped by the lateral part of the synovial flexor sheath, it enters the palm and divides into medial and lateral divisions. Through the medium of these two divisions the nerve supplies the muscles of the thenar eminence, two or more lumbricals, and the lateral three and one-half fingers with sensation on their palmar aspect, and on their more distal part of the dorsal aspect. This area of sensory supply is subject to considerable individual variation, for the median nerve anastomoses to a variable extent with the ulnar and sometimes radial nerves, connections which may explain the variability in both motor and sensory findings.

It is of the greatest importance to remember that the median nerve carries with it most of the sympathetic nerve supply of the hand, an anatomical fact associated with frequency of trophic disturbances found when this nerve is injured.¹

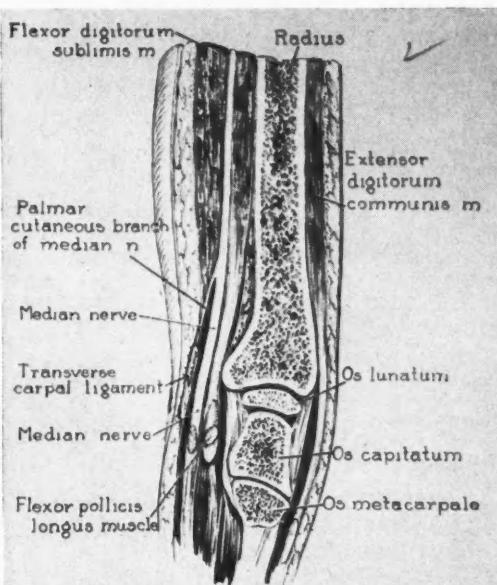


Figure 1.—Sagittal section to illustrate the relation of the median nerve in the region of the wrist. Note the close relationship which the transverse carpal ligament and the prominent lower anterior border of the radius bear to the median nerve. (Used by permission of *Surgery, Gynecology and Obstetrics*.)

CLASSIFICATION OF THE MEDIAN NERVE INJURIES IN FRACTURES IN THE REGION OF THE WRIST

In the same review these observers classified median nerve injuries as follows (I) Primary injuries. (II) Secondary injuries. (III) Late or delayed involvement. (IV) Injuries associated with treatment: (a) acute palmar flexion; (b) reduction.

The author suggests that the fourth category be enlarged to include median nerve paralysis associated with treatment and reduction of the fracture.

PRIMARY INJURIES TO THE MEDIAN NERVE

An injury to the median nerve occurring at the moment of fracture is classified as a primary injury. Because of the protection afforded by the pronator quadratus muscle, the majority of injuries develop indirectly from the pressure of a grossly displaced fragment.

The injuries most likely to fall into this group are those associated with carpal fractures and dislocations. Injury of that type is illustrated in the following case report:

CASE 1.—The patient, a 26-year-old white male, was injured May 27, 1948, when the motorcycle on which he was riding was struck by an automobile. The essential findings were: severe comminution of the olecranon, anterior dislocation of the elbow, transcarpal dislocation with fracture of the navicular, and sensory paralysis of the median nerve. There was no motor paralysis. An open reduction and plating of the olecranon was done; the transcarpal dislocation was reduced, and a cast was applied.

On July 13, 1947, when the cast was removed, sensory loss and dryness of the skin were confined to the area of distribution of the median nerve of the hand.

On September 11, 1947, under local anesthesia, the median nerve was exposed. No adhesions were noted. On injecting the nerve with saline, a constriction was evident at the level of the transverse carpal ligament. The nerve was followed into the carpal tunnel without sectioning the transverse carpal ligament. The day following operation, sensation in the thumb was normal. Five weeks later, sensation was normal in the hand, but the skin was still dry. The dryness of the skin was still present at the time the patient was last examined, February 14, 1948.

SECONDARY INJURIES TO THE MEDIAN NERVE

Injuries to the median nerve occurring within two months following fracture are arbitrarily considered secondary median nerve injuries. Most injuries that fall into this category are characterized by gradual development of both subjective complaints and objective findings. In the majority of cases, neuritis develops from continued pressure on the nerve by an unreduced fragment or excessive formation of callus.

Abbott and Saunders¹ reviewed Hilton's report of a case in which the median nerve was compressed from the excessive callus in the lower end of the radius. They also reported the case of a 47-year-old man in which a fracture of the wrist was not reduced because of the patient's cardiac status. Four weeks after the injury, numbness developed in the thumb and index finger. These symptoms were relieved by neurolysis of the median nerve two months after the injury. Following is an additional report of a case of secondary median nerve injury:

CASE REPORT

CASE 2.—A 39-year-old white female who was referred for consultation, in a fall had received a fracture through the distal third of the radius. A cast had been applied without manipulation. The wrist was immobilized in neutral position. Two weeks after the injury, numbness developed in the thumb, index, and middle fingers. There was no muscle weakness. Sensory hypesthesia corresponding to the distribution of the median nerve was noted. The patient recovered completely without treatment four months after the injury.

LATE OR DELAYED MEDIAN NERVE PARALYSIS

Late, delayed, or tardy median nerve paralysis refers to cases in which the paralysis occurs later than two months following injury. Such cases were reported by Paget in 1865, by De Rouville in 1905, by Lewis and Miller,⁴ who in 1922 cited a case observed by Phemister, by Abbott and Saunders¹ in 1933, by Zachary⁵ in 1945, and by Cannon and Love² in 1946. Onset of paralysis in those cases varied from three months to 18 years after injury.

None of the cases observed by the author falls into this group.

ACUTE PALMAR FLEXION

Abbott and Saunders called attention to the importance of the position of acute palmar flexion following the reduction of a fracture in the development of median nerve neuritis. Of particular interest was the observation that the neuritis seemed to develop consistently in cases in which osteotomy

was done to correct malposition of the radius. In such cases the surgical trauma and the acute palmar flexion both tended to narrow the space between the radius and the transverse carpal ligament. Resultant pressure of the transverse carpal ligament on the median nerve was responsible for the clinical picture. It is scarcely necessary, therefore, to emphasize that in performing osteotomy for malposition

in the distal third of the radius, the position following operation should be sufficiently stable to allow immobilization of the wrist in neutral position. The following case report will serve to illustrate:

CASE REPORT

CASE 3.—A 48-year-old woman who was referred by an insurance company two and a half months after fracture of the left wrist, stated that the fracture had been reduced immediately after the injury and the wrist immobilized in acute flexion in a cast. There was at that time, the patient said, immediate severe swelling of the hand and numbness of the thumb, index, and middle fingers.

Upon examination, dryness of the skin on the volar aspect of the thumb, index and middle fingers was noted, with sensory hypoesthesia corresponding to the same area. The fingers were stiff, and flexion brought them only to an inch from the palm.

Three months later, normal sensation had returned, and within ten months all evidence of median nerve paralysis had cleared except for dryness of the skin on the palmar aspect of the index finger.

INJURIES ASSOCIATED WITH TREATMENT

The following case illustrates paralysis of the median nerve following repeated attempts at reduction of the fracture:

CASE REPORT

CASE 4.—A seven-year-old boy was referred a month after a fracture of both bones of the forearm had been reduced. Roentgenograms in the cast showed the wrist to be in slight palmar flexion and there was contact of the fractured ends of the radius through one-half of the shaft. In roentgenograms taken ten days later, complete displacement of the fracture was noted. The day before the patient was referred, the physician referring him had made repeated but unsuccessful attempts at reduction of the fracture.

Upon examination, prior to manipulation of the fracture, loss of opposition of the thumb was noted, together with weakness of flexion of the distal phalanx of the thumb and index finger, and sensory anesthesia corresponding to the distribution of the median nerve. The skin was dry in the same area. Satisfactory reduction of the fracture was obtained and the wrist was immobilized in neutral position. A month later sensation was normal and opposition of the thumb had returned, but the skin was still dry.

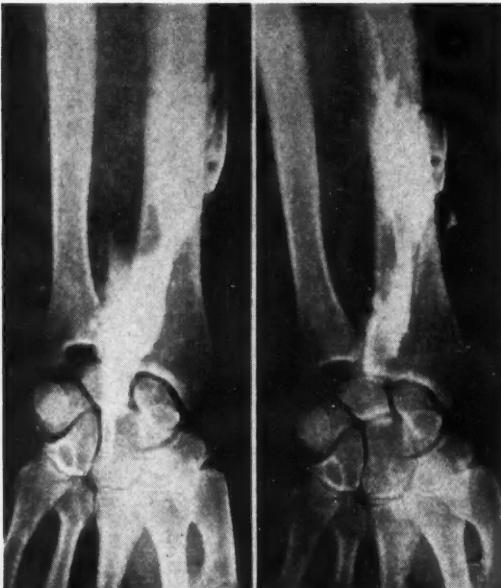


Figure 2.—Left, roentgenogram after injection of the sheath of the median nerve with lipiodol with the wrist held in extension. In this position the solution flowed freely into the palm of the hand. Right, roentgenogram after injection of the sheath of the median nerve with lipiodol with the wrist held in acute palmar flexion. The solution is arrested at the level of the transverse carpal ligament. (Used by permission of *Surgery, Gynecology and Obstetrics*).



Figure 3.—Case 1. Transcarpal dislocation with an immediate median nerve injury.



Figure 4.—Case 4. Median nerve injury developed during manipulation.

DISCUSSION

As poor functional return and prolonged disability are common after fractures in the distal third of the radius which are accompanied by severe swelling of the fingers, more attention should be given to numbness of the fingers which is frequently noted in connection with these symptoms, for this is probably the result of nerve compression. Anatomically, it has been demonstrated that the position of acute palmar flexion causes a narrowing of the space between the radius and the transverse carpal ligament. The presence of hematoma and the swelling accompanying both the fracture and the trauma caused by manipulation would further tend to narrow the space and thus increase the possibility of median nerve compression. This mechanism explains the majority of cases of primary median nerve injuries.

Except for the comment by Speed in discussing the paper by Lewis and Miller⁴ in 1922, scant attention has been paid to median nerve injuries due to transcarpal dislocations of the wrist. Median nerve neuritis as a result of transcarpal dislocation was illustrated in Case 1. The median nerve can also be injured more directly during manipulation, especially in cases of fracture of both bones of the forearm in children. Reduction of such a fracture is most easily accomplished by hyperextension at the site of the fracture; but it should be noted that the median nerve can be stretched or contused during manipulation. The same mechanism could be responsible for injury to the median nerve in the treatment of Colles' fractures where the deformity is increased to break up an impaction, as is advocated in many textbooks. Case 4 demonstrates this type of injury to the median nerve.

The development of neuritis in both median and ulnar nerves many years after a fracture has healed in poor position is a complication which needs greater recognition. In the literature are reports of cases in which neuritis of this kind occurred from two months to 20 years after the injury.

DIFFERENTIAL DIAGNOSIS

The neurological literature contains frequent mention of thenar muscle atrophy, usually without accompanying sensory disturbance. No causative factor has been found. This has been labelled "thenar muscle paralysis" and it is differentiated from median nerve injuries in fractures mainly by the absence of bony changes in the wrist or forearm.

TREATMENT

Median nerve neuritis can best be prevented by good reduction of the fracture and immobilization of the wrist in neutral position. If symptoms of neuritis develop immediately after reduction, correction of the palmar flexed position is indicated at once. If symptoms persist after four months, surgical exploration of the median nerve is advisable.

Whatever the cause of the neuritis, neurolysis or neurolysis with sectioning of the transverse carpal

ligament will arrest or cure the disability in the majority of cases. The improvement in neurological function following operation has varied with the degree of severity of the neurological status. The more complete the nerve palsy present, the less recovery occurs.

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Discussion by LLOYD D. FISHER, M.D., Oakland

Dr. Meadoff is to be commended for emphasizing the occurrence of median nerve damage in injuries about the wrist. By adding to the number of reported cases he indicates that such injuries are probably far more frequent than has generally been supposed. This complication is especially important because of the fact that loss of the power of opposition of the thumb is extremely disabling.

We might ask why this complication has been so frequently and commonly overlooked. Some of the reasons may be as follows:

1. The fracture of bone receives major attention and concern, and other injuries, unless quite obvious, are apt to be overlooked.
2. Failure to recognize that median nerve injury is a not infrequent complication of wrist injuries.
3. Difficulty in evaluating neurological changes in the presence of the symptoms and findings of acute fracture.
4. The very frequent variability in motor and sensory supply of the median nerve.

I am afraid that some of us, in our haste and in our concern over the bony injury, have forgotten one of the fundamental teachings of fracture treatment: That careful examination should be made for evidence of nerve and vascular damage in every fracture.

It is well to remember that the motor supply of the first two lumbricals comes by way of the terminal cutaneous branches of the median nerve. Also, it bears repeating that no matter what variations occur in the nerve supply, sensory changes in the index finger are a sure indication of median nerve damage. In secondary or delayed cases, sudomotor change in the skin is important confirmatory evidence.

Most important of all, I believe, is the emphasis on prevention of median nerve damage. To be sure, nothing can be done in a preventive way about primary nerve damage. We can, however, by proper treatment, avoid or minimize later damage.

In general, as Dr. Meadoff has pointed out, good reduction, proper immobilization, and, later, proper mobilization are all-important. Specifically such prevention should consist of:

1. Avoidance of hyperextension of the fracture during reduction.
2. Accurate reduction by restoring the dorsal, radial, and rotary displacement of the distal fragment, adding the least possible amount of trauma in so doing.

3. Avoiding immobilization in the hyperflexed position.
4. Maintenance of reduction by proper immobilization.

The immobilization in a neutral position advocated by Dr. Meadoff is ideal if one is able to maintain reduction in that position. Personally, however, I have not been able to consistently maintain reduction in the neutral position.

Some of the remarks of Sir Reginald Watson-Jones are very pertinent in this regard. In regard to sources of disability in Colles' fracture he says: "In a very few cases, the backward displacement stretches the nerve over the front of the wrist and transient median neuritis develops, with tingling and numbness of the fingers and weakness of the thenar muscles."

As to manipulative reduction, he states: "The fragments should not be disimpacted by increasing the backward displacement because this increases the injury to already bruised tissues over the front of the wrist. There is no difficulty in completely disimpacting the fracture by strong traction applied to the fingers and thumb. When this has been done, reduction of the displacement must be completed by direct pressure over the fragments."

Regarding immobilization after reduction he says, in part: "The carpus and lower fragment are pushed inward and forward. There is no need to flex the wrist strongly, and the Cotton-Loder position should be avoided."

Discussion by J. B. de C. M. SAUNDERS, M.D., San Francisco

Dr. Meadoff has rightly emphasized that injuries to the median nerve in fractures in the region of the wrist are a not infrequent complication which is frequently overlooked.

That injury to this nerve in greater or lesser degree is not uncommon is indicated by the fact that within the year following the initial publication by Dr. Abbott and myself we encountered no less than 19 additional cases. It is true that in the vast majority of these cases the nerve damage was incomplete and the symptoms very transient but in one or two the damage was of sufficient magnitude to demand neurolysis. In most instances, the loss was purely sensory and seldom was motor power affected.

We feel that in all cases of fracture of the lower end of the radius the surgeon should carry out a meticulous examination in order to determine the presence or absence of median nerve involvement before reduction is attempted. In this connection, it is most interesting to note Dr. Meadoff's observation that the median nerve may be traumatized by hyperextension at the time of reduction. I am sure that this is possible, but to be truthful, the mechanism had not occurred to me. We should also like to emphasize the point that excessive palmar flexion as a position of fixation is a frequent cause of injury to the nerve, for in this position it may be pinched between the bony prominences and the proximal edge of the transverse carpal ligament. If it is found necessary to use a position of exaggerated palmar flexion for fixation, frequent examinations of the sensory and motor supply of the thumb and index finger should be made in order to avoid possible injury to the nerve, which, as we have noted, may lead to a degree of permanent loss of the function of the hand.

I wholeheartedly agree with Dr. Meadoff that this is a far more frequent complication than the textbooks would lead one to believe.



Rheumatoid (Marie-Strumpell) Spondylitis

Technique of Examination and Importance of the Costal Joints

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SUMMARY

Rheumatoid spondylitis in the early prodromal stage may present a complex and obscure clinical picture making diagnosis difficult. It is in this early stage that roentgen examination of the small joints of the spine will often aid in or lead to the correct diagnosis of the disease in which the classical clinical symptoms and roentenographic findings in the sacroiliac fissure have not appeared and may never appear. The changes in these small joints, particularly in the costovertebral and costotransverse joints, are less obvious and require experienced and careful interpretation, but it is to these that the roentgenologist must direct his attention if he is to be of assistance in early diagnosis. A technical procedure for this examination is presented, along with a discussion of the clinical importance of changes at this site.

Demonstration of involvement of the sacroiliac joints is of diagnostic importance, but this finding is no more necessary to the diagnosis of rheumatoid spondylitis than is involvement of any other single joint of the spine. Insistence on sacroiliac involvement will often result in missed diagnosis, and has led in part to erroneous conclusions as to sex incidence of the disease.

Although many observers have reported that rheumatoid spondylitis is preponderantly a disease of males, in the author's experience it was found to affect about as many women as men. In a series of 151 patients with rheumatoid spondylitis who were treated by the author in 1946-47, 76 were males and 75 females; and of 97 untreated patients observed, 53 were males and 44 females. In all these cases, the disease was diagnosed by clinical and radiographic studies, and none by radiographic study alone. Possibly because of architectural differences and usually less vigorous physical activity, females are less prone to develop sacroiliac changes, and much less commonly reach the clinical "spondylitic" stage. This will account, in part at least, for the wide disparity in reports of sex incidence in which there is a variance of 13:1 male¹⁷ to 1:1 reported herein.

Seven¹⁵ stated in 1903 that the first change in rheumatoid spondylitis is a synovitis of the small posterior intervertebral or apophyseal joints, and that in those cases in which the lumbar spine was attacked, the sacroiliac joints might become involved. Simmonds¹⁶ and Fraenkel¹⁷ described changes in the apophyseal joints in 1904. Oppenheimer¹⁸ observed that the most important spinal joints, the apophyseal, receive little or no attention from orthopedists, radiologists or rheumatologists. They are true diarthrodial joints, and differ almost as much from the sacroiliac joints as do the hip joints. Passing references concerning involvement of the costal joints have been made by a number of observers, but while changes at these sites are extremely important diagnostically and in the disabling effects of the disease, little effort has been made to show these joints by roentgen study.

The costotransverse and costovertebral joints can be well visualized only in an anterior-posterior projection, with the central ray directed 20 degrees cephalad and centered between the fifth and seventh thoracic vertebrae (Figure 1). In large-boned individuals a right and left 10 degree medial oblique cephalic projection may be necessary to outline the costovertebral joints. The conventional 90 degree anterior-posterior projection of the thoracic spine does not outline these joints well, and inaccuracies of interpretation may occur in any but advanced cases.

In a detailed study of over 500 cases of rheumatoid spondylitis in all stages, it was observed that in the great majority the earliest x-ray evidence of joint involvement was to be found in one or more of the costal or apophyseal joints. Rarely were the costal and apophyseal joints regarded as normal

RHEUMATOID spondylitis is a chronic progressive disease characterized by lesions of the small joints of the spine and ribs, and of the sacroiliacs, by youth at the onset,¹⁴ and by a tendency to progress to spinal ankylosis. The cause is not known, but it presents many features common to infectious disease, and it is thought by some, probably correctly, to be unrelated to rheumatoid arthritis or arthritis deformans. It is one of the common diseases of mankind, and is to be suspected in those cases in which there are unexplained peripheral and visceral pains, elevated temperature and increased blood sedimentation rate, even though the late classical manifestations of back pain, limitation of motion of the spine and roentgenological evidence of the disease in the sacroiliac joints have not yet appeared.

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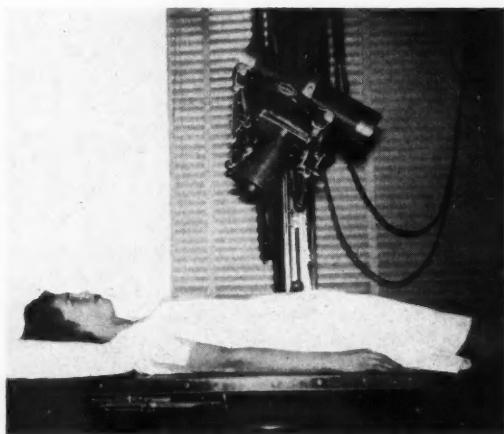


Figure 1.—Costal joints show best by an anterior-posterior 20° cephalad oblique, centered through the fifth to the seventh dorsal vertebrae.

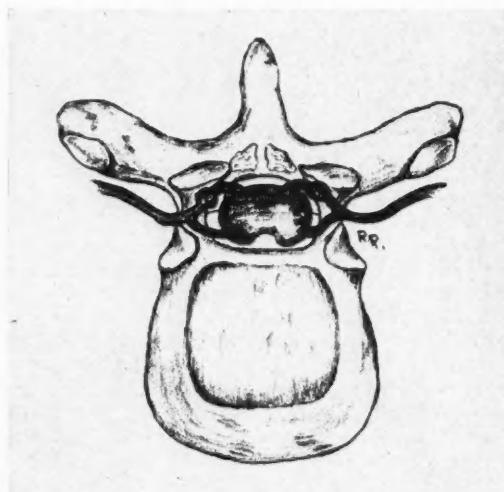


Figure 2.—Inferior surface, mid-dorsal vertebrae, showing apposition of the spinal nerve roots to the costal and apophyseal joints.

when the sacroiliac joints showed the changes considered characteristic, and regarded by most observers^{2, 14, 9} as the earliest findings in rheumatoid spondylitis. Also, in many cases, particularly in females, advanced changes were found in these small joints when the sacroiliac joints appeared to be normal. This is logical if one is to assume that the most common of the prodromal symptoms in the "pre-spondylitic stage" of Scott¹⁴—pain, local or referred to the extremities, abdomen, or thorax—is caused by reflex or direct root irritation of the spinal nerve trunks, which are closely apposed to the involved joints (Figure 2). Oppenheimer,¹³ in reporting on a total of 50 cases, in all of which characteristic apophyseal changes were noted, said that there was sacroiliac involvement in only 86 per cent

of the total, and in only 60 per cent of those cases in which the apophyseal changes were in an early stage. Buckley,⁴ Gordon,⁸ Forestier⁶ and others have reported cases in which the sacroiliac joints were not involved. Borak³ concluded that the changes in the sacroiliac joints commonly associated with rheumatoid spondylitis are degenerative and are caused by increased torsional strain produced by stiffness of the lumbar spine, and are not the direct result of the disease.

Actually, the long fissure between the sacrum and ilium, commonly termed "sacroiliac joint," has two components: the true cartilaginous joint which occupies about the lower anterior third of the fissure, and the balance a fibrous synostosis without synovia. Since rheumatoid spondylitis originates as synovitis, it follows that the changes demonstrated by x-ray in the sacroiliac fissure are of two types: one, actual involvement limited to the true joint, and the other, seen equally often, a secondary degeneration of the fibrous ligaments joining the two bones. This latter finding is seen not uncommonly in one, and less often in both sacroiliac joints in long standing cases of spinal malalignment or fixation from any cause.

First, synovitis and exudation into the joint occur. In this stage, x-ray findings are usually absent. Next, an infiltration of small round cells develops, and an invasion of connective tissue starts. Here, the x-ray findings of clouding of the joints and loss of definition and irregularity of the articular surfaces, and sometimes periaricular or generalized osteoporosis, appear. The latter is extremely difficult to determine unless well developed. The apophyseal and costal joints are probably never involved in the initial stages simultaneously; rather, the process begins in one or more joints, and may remain localized, or others may be involved successively, so that it is usually possible, in all but very early or late cases, to see many stages of the disease in an individual case (Figures 3, 4).

These changes may occur without the appearance of the clear-cut local manifestations of pain, tenderness and limitation of motion considered by many to be characteristic of the disease. (A rapid sedimentation rate is present during exacerbation in between 80¹ and 90¹⁰ per cent of cases, and a high spinal fluid protein content—45 to 121 mg. per cc.—may be found.) It is in these early stages, because the symptoms may be so variable in both location and severity, that the clinical diagnosis is difficult; and patients have been diagnosed as having subdeltoid bursitis, hip joint disease, pleurisy, sciatica, renal colic, intercostal neuritis, "acute surgical abdomen" (in severe acute cases), and herniated disc.⁵ To these erroneous diagnoses are added, from the author's experience, coronary artery disease, psychogenic backache, psychoneurosis, rheumatic fever, acute pancreatitis, gall bladder disease, and appendicitis and herpes zoster.

Rarely, tuberculosis, coccidiomycosis, brucellosis and pyogenic infections may produce similar changes. The lumbar apophyseal joints show a sim-

ilar appearance secondary to disc degeneration, one segment above and at the disc level, in about 20 per cent of cases. Hypertrophic osteoarthritis commonly involves these joints; in this disease the joint space appears to be narrowed but remains clear, the articular surfaces are smooth, and there is marginal spurring and dense sclerosis of the articular surfaces (Figure 5). Frequently, in the third decade of life and after, a combination of the two types is seen.

In the later stage the findings become more definite. Articular surfaces become eroded and serrated, cartilage is replaced by connective tissue, the joint space becomes dense and is finally obliterated by bony proliferation, subarticular sclerosis develops, and fibrocytic degeneration may be seen around the joints, and they become completely ankylosed.

In the final stage of rheumatoid spondylitis, which is seen proportionately rarely, the "bamboo" spine caused by calcification in the longitudinal ligaments and annulus of the disc¹¹ appears. At this time, the patient is stooped, with all spinal and rib cage movements frozen—the typical spondylitic wreck (described by Scott¹⁴) who might have been salvaged

if proper diagnosis had been reached early and treatment begun immediately.

The author is in accord with Comroe's⁵ dictum that "it is good medical practice to always perform a sedimentation rate and x-ray the low back and sacroiliac joints when a patient complains of vague aches and pains in the back or extremities," but to it would add: x-ray the costal and lumbar apophyseal joints when a patient complains of unexplained abdominal or thoracic pains and/or vague aches and pains in the back or extremities.

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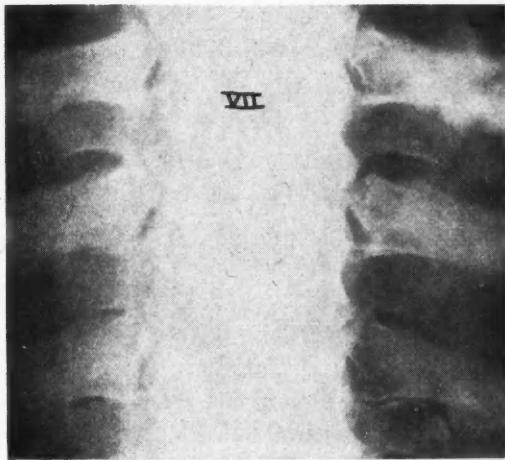


Figure 3.—(M.N.): Female, age 32. Vague chest and precordial pains intermittently ten years. Bilateral narrowing, haziness and loss of joint definition, 7th and 8th, slight haziness 10th left, normal 10th right, costotransverse joints. Narrow and hazy 9th costovertebral. Others, normal. Sacroiliacs normal.



Figure 4.—(F.H.): Female, age 42. Vague intermittent pains until injury one year ago, followed by onset of severe back pains, and stiffness. Varying degrees of involvement of the costotransverse joints, with complete ankylosis of that of the fifth, right. Minimal changes right sacroiliac joint. Completely relieved of symptoms following two series of treatments.



Figure 5.—(M.A.): Female, age 38. Bilateral radiating chest and upper abdominal pains intermittently for years. Hypertrophic osteoarthritis (degenerative) of the ninth left and tenth right costotransverse joints. Joint spaces clear. Sub-articular sclerosis and spur formation. Normal clear costotransverse and costovertebral joints of the ribs above 9 and 10.

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Discussion by EDWARD W. BOLAND, M.D., Los Angeles

Dr. Williams is among the first to report detailed roentgenographic studies of the costovertebral joints in rheumatoid spondylitis. Heretofore most attention has been directed toward those changes which occur in the sacroiliac and apophyseal joints, and in the paravertebral ligaments. Yet the costovertebral joints are deserving of consideration because involvement of them leads to some of the most distressing clinical manifestations of the disease, namely, chest pain particularly on inspiration, possibly so-called girdle pains, fixation of the thoracic cage in an expiratory position with flattening of the anterior chest wall, diminished pulmonary excursion with reduction of vital capacity and exertional dyspnea.

Dr. Williams' statistics on sex incidence are at variance with those published by others. Almost all investigators have agreed that rheumatoid spondylitis has a predilection for males, the sex ratio varying in different series from 6:1 to 20:1. In my own private practice the ratio has been approximately 4 males to 1 female. The disparity between Dr. Williams' statistics and those of others may be explained perhaps by differences in criteria for diagnosis.

At the Army Rheumatism Center, Army & Navy General Hospital, I had opportunity to study a large number of soldiers with this disease. In one period of two years, for example, 1,084 patients with rheumatoid spondylitis were admitted. These comprised 18.1 per cent of 6,000 consecutive admissions for rheumatic disease during that period. Some of my observations and conclusions differed from those presented here by Dr. Williams.

In the vast majority of those patients (80 per cent) the first symptoms began in the lower back. These usually consisted of aching and stiffness, at first recurrent but later persistent. Sometimes sharp pains or "catches" in the buttocks, hips or lower back constituted the first complaints. Intermittent sciatic pain, often alternating from side to side, was present in about 10 per cent of early cases. Much less frequently (20 per cent) were the first symptoms located at higher levels (lumbar, thoracic or cervical segments).

Dr. Williams has stated that females are less prone to develop sacroiliac involvement and that in them the early pathologic changes more often begin higher in the spine, in the costovertebral and apophyseal joints. In my experience, the majority of women have the first clinical manifestations in the lower back, although the percentage may be somewhat lower than in men. A word of caution should be inserted here: An unequivocal diagnosis of rheumatoid spondylitis, even in females, should be made with hesitation unless characteristic alterations are present roentgenographically in the sacroiliac and/or apophyseal joints. X-ray evidence of bilateral sacroiliitis is almost pathognomonic of rheumatoid spondylitis. But when the sacroiliac joints are roentgenographically negative, clinical criteria should be at hand before the diagnosis of spondylitis is definitely made. These criteria include characteristic symptoms and physical findings, elevated erythrocyte sedimentation rate, or perhaps coexisting rheumatoid arthritis in peripheral joints.

In experience among soldiers, the earliest roentgenographic alteration were almost invariably located in the sacroiliac joints; certainly the sacroiliac changes were the most diagnostically reliable. Shebesta and I made a special study attempting to correlate the clinical and roentgenographic changes in 50 cases. Detailed clinical appraisal and exhaustive roentgenographic studies of the spinal joints were accomplished. Even when there were clinical signs of lumbar and thoracic involvement in early cases the apophyseal joints more often appeared normal, or at most questionable. Almost always the sacroiliac findings were more definite and of more diagnostic value. In some cases of longer standing, paravertebral ligament calcification was present before diagnostic changes in the apophyseal joints had occurred. We concluded that alterations in these articulations were quite inconstant and often late in appearing. For practical diagnostic purposes changes in the sacroiliac joints were found much more reliable in early cases. We made no special study of the costovertebral joints.

Moreover, we believed that the severity of the spondylitis, as appraised clinically, was often reflected by the character of the sacroiliac changes. In mild cases, juxta-articular sclerosis and narrowing of the joint were the predominant features; subchondral rarefaction was minimal and joint mottling was not prominent. In moderate cases, observed before ankylosis, subchondral rarefaction and sclerosis were present in fairly equal proportions, and mottling of the joint was definite. In severe cases, juxta-articular rarefaction and joint destruction were extreme; subchondral sclerosis was not so conspicuous.

As Dr. Williams has suggested, roentgenographically demonstrable alterations in the joints of the spine result from destruction of articular cartilage and from alterations in juxta-articular bone. When the pathologic process is restricted to the synovial membranes, roentgenograms are negative (swelling resulting from synovial effusion into the spinal joints cannot be visualized roentgenographically). As in peripheral rheumatoid arthritis, it may take months or years to develop sufficient cartilaginous or osseous alteration to be recorded on roentgenograms; the pathologic changes in some joints may never progress sufficiently to show positive x-ray findings. Therefore there is almost always a time lag between the development of localizing physical signs and the appearance of roentgenographic abnormalities. For example, x-ray changes in the sacroiliac joints may not appear for months or even years after the onset of back symptoms. Similarly, the patient may complain of pain, aching and stiffness and demonstrate local tenderness, muscle spasm and limitation of motion in the lumbar, dorsal or cervical regions for months or even years before the apophyseal joints show roentgenographic abnormalities.

The degree of extension may be much more accurately appraised by clinical than by roentgenographic criteria. Involvement clinically is often one or two segments higher than is evident roentgenographically.

This fact is important when the prescription for roentgen therapy is written. Obviously the selection of segments for treatment should depend mostly on the extent of clinical involvement if all actively diseased areas of the spine are to be treated.

DR. WILLIAMS (closing): Dr. Boland, by his careful and very extensive investigation of a large series of cases and his many publications on the subject, has added much to the knowledge of this disabling disease. While at variance on some of the aspects of the x-ray findings, I am sure that we

can agree wholeheartedly on one point, and that is the value of early diagnosis. This is extremely important to the patient for two reasons. First, that he can be given advantage of every type of treatment available, of which x-ray is probably the most effective. Secondly, he can avoid the expense and disappointment of missed diagnosis and misdirected treatment. I have listed the errors of diagnosis given by Comroe and in those cases that I have seen. Of all these, psychoneurosis is the most difficult for the patient to accept. It requires more painstaking and experienced study of roentgenograms of the small joints of the spine and ribs than of the sacroiliacs, but the results obtained more than justify the effort, for it is here that early evidence of the disease is found, and usually long before the sacroiliac joints present discernible changes.



Problems of General Practice in Rural California

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SUMMARY

Medical care for rural populations is an important problem facing the medical profession nationally and locally. The mechanism for solution lies in the existing American Medical Association and California Medical Association committees on rural medical service and further development of "local health councils."

Additional emphasis on training of physicians for general practice is essential through medical school graduate and postgraduate periods.

The problem of providing additional adequately equipped and staffed hospitals must receive much consideration.

Recognizing that passiveness invites aggressive non-medical agencies to foster bureaucratic dictation inimical to the practice of medicine, the rural physician must act through medical and community organizations to correct weaknesses in the structure of medical practice.

Bureau of Agricultural Education, the Agricultural Council of California, the Public Health League, the Parent-Teachers Association, the clergy, the state nurses' association, the two dental associations in the state, the California State Department of Public Health, and laymen and physicians from the rural areas of the state.

The addresses and discussions were developed to bring out "the practical aspects of rural medical care." The remarkable point of the conference was the agreement of the majority of speakers that the solution of the various phases of the problem should be worked out by the communities themselves. The main request of the lay groups is for intelligent cooperative leadership and information. They look to their doctors for this aid. Unfortunately, the rural physicians themselves have insufficient information and their time is so limited that they have difficulty in taking upon themselves this added burden singlehandedly in each community.

A solution of the numerous problems probably lies in the organization of voluntary "local health councils." These local health councils, according to the American Medical Association plan,⁶ are used instrumentally in furthering the spread of prepayment medical care plans. They may be expanded to meet any of the medical needs of the community, as they were developed in Alabama, North Carolina, West Virginia, Vermont and Virginia,⁵ and are now being organized in Colorado,⁴ and the country as a whole. They comprise representatives from all interested local groups. The activities and responsibilities are divided between committees as necessary. Development and guidance of such groups, if not the actual direction, is the immediate responsibility of the local physicians and the California Medical Association Committee on Rural Medical Service.

The most important problems confronting rural practice are: Increasing the number of younger adequately trained physicians; construction and maintenance of adequate hospital facilities with properly trained and supervised nurses, laboratory technicians, and other personnel; the continued improvement of office equipment, methods and assisting staff; prepayment medical and hospital service plan extension, evaluation and assistance at the local level.

The practicing physician's personal problems in office diagnosis and care of patients are urgent. More adequate, easily available clinical laboratories together with modern, efficient x-ray services are needed. Increased activity in the field of preventive medicine must be stressed.

It is clear that no one group, committee, society or, last—and least desirable—legislation, will solve these problems. Recognition of the various entities,

INCREASING discussion by the lay press and rural organizations has focused critical attention upon medical care now being given the farm communities as units and as a whole. In response, the American Medical Association's Commission on Medical Service created the Committee on Rural Medical Service. Annual conferences sponsored by this committee have been held in Chicago since 1946. The purpose was to bring the various affected groups together with the American Medical Association committee for discussion of mutual problems. Individual state rural medical service committees have been established to work in conjunction with the parent American Medical Association committee on state and local levels.

In accordance with this plan, the first California Rural Health Conference was held in Sacramento, December 6, 1947. This conference brought together representatives of the California Medical Association, the State Legislature, the State Grange, the California Farm Bureau Federation, the Rural Health Association, the Wool Growers' Association, the dairy industry, the taxpayers' association, the

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analysis of the factors involved and utilization of all available agencies of organized medicine together with the assistance of interested community and state-wide organizations will serve both to advance the purposes and provide a common ground for fruitful effort.

TRAINING FOR GENERAL PRACTICE

The curricula of the medical schools are organized to cover the field of medical arts and sciences in four years. The basic or preclinical sciences and clinical sciences are increasingly emphasized to keep pace with the rapid advances in research. This tends to diminish the time available in the medical school and hospital graduate training period for consideration of the more philosophical aspects and the practical elements of the art and practice of medicine. The increased period of training and the financial burden have imposed economic and sociologic problems upon the young medical graduate sufficient to warrant immediate serious objective consideration.

Evaluation of the graduate and undergraduate training methods should take into consideration the problems of those members of the profession who have stretched or cut their academic ties but upon whose shoulders the major burden of practice rests. The judgment and opinions concerning these questions by this portion of the profession are not only worthy of consideration but necessary for the proper integration and development of medical educational principles and policies. Individually these physicians are mainly inarticulate. As members of medical organizations in their own communities, and in the state and the nation, they may exert their energy and ideas to effective measures.

Medical schools are not unaware of the problem of adequate training for physicians electing to engage in general practice, but it is only recently that a few have adapted a portion of their undergraduate and graduate programs specifically to the purpose of training relatively well grounded physicians for general practice. The University of Wisconsin Medical School preceptor plan, originated in 1927, has continued in operation. Each senior student spends three months with a preceptor located in a smaller center outside the medical school sphere. Here, guided and taught by an experienced member of the profession, he is exposed to the practical problems of actual diagnosis, care and treatment of individuals in their own environment. The fact that this program of practical undergraduate training has continued to function effectively for the past 21 years is high commendation of the medical profession, the individual preceptors and the University of Wisconsin Medical School for their cooperative understanding and energy in perpetuating the program of insuring adequately trained young men for the areas requiring them.

A number of the middle western medical schools are instituting two-year general internships with an optional third year residency to meet the demand for properly trained physicians for the rural areas. The University of Minnesota Medical School is in its

second year of experience in this field, and the University of Michigan Medical School has a similar plan. Two years ago the University of Colorado instituted a broad program of undergraduate and graduate training for general practice which has changed the complexion of the graduating classes remarkably.² Prior to the change 90 per cent of the graduates were electing to enter specialties. Approximately 75 per cent of the 1947 class elected to enter general practice. Other measures are being developed to increase the number and quality of physicians for rural and general practice. The University of Illinois Medical School currently is to limit the enrollment of candidates from the metropolitan population to 50 per cent of the total enrollment, thus providing that one-half of the students come from rural areas and the smaller cities. Scholarship funds for students electing to practice in rural areas have been established by the Medical Society of the State of Illinois. Other states in the Middle West have established scholarship funds and loan funds for the same purposes.

Postgraduate education has been given a marked impetus since the war. Primarily the medical school and teaching hospital programs were designed for the returning veteran. The number of veterans interested in intramural postgraduate work is now diminishing. Many of the departments are now engaged in redesigning their courses to the needs of the men who have been and are in actual practice. There is a marked difference in the problems of the two types of physician. The veteran has an opportunity for a "breathing spell" and is partially subsidized for his period of study. This is not the case with the physician actively engaged in practice and well rooted. It may be necessary to devise special methods to provide adequate refresher courses and postgraduate training for these physicians.

HOSPITALIZATION FOR RURAL COMMUNITIES

Analysis of the financial provisions of the Hill-Burton Act, together with information in the preliminary hospital survey for California by the California State Department of Health Bureau of Hospitals,³ indicates that the funds provided from both federal and state sources will cover only a small fraction of the cost of hospitals of the kind and size needed for rural communities. This, coupled with the obvious disadvantages of governmentally dominated and directed construction, emphasizes the importance of local initiative and direction in this field. Full financing within the community might well be a better and ultimately less expensive procedure.

Concomitant with the problem of providing hospitals is that of adequate nursing staffs. Training and abilities of nurses for rural hospitals must be general, with stress upon adaptability, initiative, and resourcefulness to adjust simplified measures and equipment to emergencies as they arise. In this regard the program of nurse training at the University of Minnesota hospital might be examined with profit. Some of the members of each class are

assigned or may elect a three-month period of training in small general hospitals before graduation.

RELATED CONSIDERATIONS

The supply of x-ray and clinical laboratory technicians must be greatly augmented. Small hospitals must find technicians capable in both fields if they are to survive the burden of overhead and operate self-sufficiently. Individuals trained to competence in both fields are not now generally available, nor is the duality of duty looked upon with favor by licensing bureaus or hospital authorities.

Organization of the medical staff of each hospital, with frequent meetings to discuss problems arising in practice, will greatly enhance the value of the hospital to the community and to the physicians themselves. Regular staff meetings, journal clubs and the added incentive derived from associations in the hospital are a spur to continuation and post-graduate study, and even to research. Increased and continued emphasis of preventive medical practices must be stressed. Early correct diagnosis and treatment of the patient must be repeatedly emphasized. The general practitioner must recognize that the over-all programs of the national, state and local committees of organizations such as those dealing with heart disease, cancer and arthritis, rely ultimately upon him to carry on the work of case finding, segregation and treatment to the point where special services are required.

Much in the fields of medico-economics and public relations that is of importance to medicine as a profession is neglected by the rural practitioner. In the past these factors were unconsciously dealt with by the individual physician. Complexities now require coordination of effort to counteract the forces in opposition. Increased thought, study and enterprise by the individual physician through his community, county and state organizations are needed.

Plans should be developed for adequate custodial care of the patient to supplant the antiquated relief homes, poor farms and rest homes now in operation. The county-operated infirmaries might well be supplanted by institutions operated in conjunction with community or local hospital district units to permit the care of self-respecting elderly people as such, in spite of personal financial difficulties. The problem of increased medical care and expense incidental to advancing years and reduced income should be

worked out by the physicians, the community, the families and other responsible agencies, and not left to the vagaries of political expediency. This is said in an effort at objective analysis looking toward a program to correct obvious weaknesses and defects in rural medical practice, for a passive attitude by medicine in such matters will encourage aggressive non-medical agencies to foster further bureaucratic developments which will serve to limit the effectiveness of medical practice.

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Discussion by J. FRANK DOUGHTY, M.D., Tracy

The problems of rural medical service have been well presented in this paper. Few doctors graduate from medical schools today, trained to be a "complete doctor" such as is required for rural practice. Eighty per cent of the illnesses can be competently cared for by the general practitioner, and at much less expense to the patient. There is little indication that our medical schools, necessarily staffed by specialists, are aware of their responsibility in this regard.

Hospital facilities in rural areas would attract physicians and make for better quality medical care. The Hill-Burton Act is encouraging hospital construction in rural areas. In California, our State Department of Public Health was ready with the hospital survey, conducted by its Division of Hospital Surveys, ably captained by Dr. Philip K. Gilman. As a result, California will have more hospital beds. Many communities are financing their own hospitals in whole or in part.

There is a great future for the well trained doctor who is interested in the individual and the family, to render medical service in the rural areas.

The "complete doctor" treats the individual as well as the disease, and great are the satisfactions of such service in rural America.



The Place and Training of the General Practitioner

WARD DARLEY, M.D., Denver

SUMMARY

Training for the medical student whose goal is general practice should aim at equipping him to maintain the close personal relationship with the patient which is considered the ideal basis for the treatment and prevention of disease. Preparation for general practice should anticipate graduate experience on a par with that which is currently considered necessary for the various specialties. Internship should be such as to fit the general practitioner to the peculiarities of the kind of community in which he will practice. Ability to recognize his own limitations and situations in which special consultation or referral are indicated should be developed in the student.

The University of Colorado School of Medicine has adopted a course of training, from pre-medical education through internship, designed for the student who is to specialize in general practice.

Since the end of the war, Colorado has been attempting to do just this. The term "Colorado" is used broadly because the effort represents activities not only of the School of Medicine but of the state government, the medical societies, the hospital association, voluntary health organizations and many other units and interests in the state-wide community. While some of the thinking has taken root from suggestions contained in the literature, particularly the Weiscotten report³ and Allen's *Medical Education and the Changing Order*,⁴ much of it has developed as the result of our own observation of our own faults and problems and as the result of our own estimates of our own resources and responsibilities.

Walter Bauer has said that it is too bad that all individuals with "M. D." after their names are not physicians. While the qualities that make for the true physician are, in all probability, inherent in the individual and hence the original selection of the student for medicine is of the first importance, we feel that, nevertheless, the educational processes should do everything possible to develop and stimulate the expression of those qualities and abilities that are essential. In developing curricula that attempt to do this, we feel that the tendency for medical care to become less personal than it used to be is constituting a definite handicap. Doctors now tend to concentrate in the larger towns and cities. Roads are good; automobiles are comfortable and fast; consequently, more and more the patient comes to the doctor instead of the doctor going to the patient. The average physician sees many more patients in a day than he used to. As a result the time per patient is reduced at the expense of the patient-physician relationship. Doctors are joining together in groups and clinics. Patients are hospitalized whenever possible, even for minor illnesses. Interns or junior men take patients' histories, frequently do the physical examinations, make most of the night calls and often substitute or alternate with the "chiefs" on daytime home and hospital calls. Nurses, technical personnel and machines and gadgets play an increasingly more prominent part in patient contacts. Thus, from the patient's standpoint, his contacts with the doctor—his doctor—are becoming more and more dilute and less and less personal. While insurance plans of one kind or another which provide for medical care may be filling a definite need, I cannot help feeling that this type of medical care adds to the depersonalization of medicine. I also feel that medical care provided through health services, such as are developing in industry, schools and governmental agencies, is an impersonal proposition. In fact, I feel that anything

REASONABLY effective medical care is dependent upon a proper balance between medical information and the ability to put this information into actual service. Today, with medical knowledge accumulating as never before and with powerful factors operating to alter the social and economic setting in which medical service must be rendered, the medical profession is faced at the same time with complex problems and tremendous responsibilities.

It is axiomatic that good medical care will parallel high standards of medical education. For this axiom to hold, however, the term "medical education" must be used to denote an active process that concerns the entire period of the physician's professional activity—not just his years of basic professional preparation. The rapid and complex changes now taking place in and around medicine and its practice should create a powerful challenge to all who are interested in medical education and its complicated relationship to medical care. For some time now the time has been at hand for a reevaluation of the aims of medical education and the development of a philosophy of education and of curricula that are consistent with these aims.

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that detracts from the direct mutual responsibility between doctor and patient, as is the case when a third party pays the bills, is detrimental to the patient-physician relationship.

The development of specialism is playing an important part in depersonalizing medical practice. I recognize that the tremendous acquisition of medical knowledge has made specialism inevitable and necessary. Specialism has been productive of much good and is here to stay. I submit, however, that most specialists are primarily oriented to pathology and to patients with unusual and complicated problems. Preventive medicine and the continued care of the patient are not characteristic of specialty practice. The approach is to a part of, rather than to the total, patient. Because most of the clinical teaching in our medical schools has been and is being done by specialists and because the average medical school hospital and clinic provides an impersonal type of medical care, the educational experience of the average medical student is such that too little emphasis is placed upon the patient as a total human being. As a rule, little happens to stimulate the student's interest in the maintenance of health and the prevention of disease. His orientation is basically to the diagnosis and treatment of disease entities. His interest in the prevention of chronicity and disability is lukewarm to say the least. His teachers, for the most part, are specialists; and the courses, clinics and clinical services are organized around the specialties. Many individuals and departments take part in the patient's total care. The patient does not necessarily see the same doctor or medical student twice in succession, and as far as the doctor or the medical student is concerned, there is very little continuity or patient responsibility.

To me, one of the main reasons for the progress and success of American medicine has been the principle of the personal and intimate nature of the patient-physician relationship. I feel that the depersonalization of medicine which is gradually taking place may prove to be a serious threat to American medicine's effectiveness. I cannot conceive of a satisfying type of well-balanced medical care developing out of a system that is not based upon the activities of a physician who is not only interested in filling the gap between the patient as a person and his occasional needs for a specialist, but who is qualified to do so as well. In other words, I feel that the general practitioner, or his equivalent, should play the dominant role in any program of comprehensive medicine. There are many who disagree. Most of those in disagreement point to the internist as the one who should be concerned chiefly with the very personal consistent type of care which most of our people need and desire. If this is to be so, the training of the internist will have to be much different from what it is today.

Be this as it may, we in Colorado think that there will always be a need for the general and very personal physician and that whether it be general practitioner or internist, his training must be such as to prepare him for a special job. The general

practitioners are with us. They are the physicians who are closest to our people, and we feel that they are the ones to be developed so that they can maintain the key position in our scheme of medical care. We feel that our educational institutions should give consideration to the place which the general practitioner should play in our scheme of medical care and that his education and training should be provided for adequately.

In line with this reasoning, we feel that the basic training of all medical students up to and through the internship should be as if general practice were the only goal. Given an undergraduate and intern experience limited to the needs of general practice, we feel that an additional period of graduate or residency training is necessary if the general practitioner is to function as he should. This idea is well expressed by Jensen² in a recent paper.

A short discussion of what we feel is the developing field of the general practitioner may serve to clarify his educational needs. This doctor—a physician in the fullest sense of the word—should be interested in and qualified to function as a health counsellor and a health coordinator for a given individual from birth to death. Personal preventive medicine, as well as community health, should claim a great deal of his effort. Ability to function effectively in the prevention, early diagnosis and treatment of emotionally and personality determined illnesses should be of the first importance. General diagnostic ability predicates that he will recognize his limitations and know when specialist consultation or referral is indicated. The need for proficiency in the therapeutics of the common medical conditions should be apparent. His need for surgical ability other than diagnostic will depend upon the locale of his practice and his proximity to surgical consultants and facilities. This physician should take particular interest in the prevention of chronicity and disability and should be keen to guide his patients to an active program of rehabilitation whenever indicated. What I have been describing is Dr. Lester Evans' concept of "the continuing care of the ambulatory patient." The physician who succeeds in this area will be the one who is adequately trained for the job.

The foregoing outlines the background reasoning of our efforts to emphasize the training of men and women for general practice. As already intimated, our effort begins with the freshman year in medical school. Very briefly, the undergraduate curriculum is first concerned with presentation of medicine as human biology: the normal development, structure and function of the individual human being's physique and personality and his reactions and methods of adaptation to the environment in which he has to live. An attempt is made to stimulate a reasonable interest in medical sociology and in personal and community preventive medicine. The student is brought into frequent contact with patients as total human beings throughout the freshman and sophomore years. The transition from medicine as human biology to human biology as medicine begins in the

sophomore year, so that the last two years of the undergraduate experience can emphasize a general type of clinical training. During this period the student is given the opportunity to accept a prolonged period of supervised patient responsibility that is carried into the home, as well as through the out-patient clinic and hospital. Detailed specialty procedures and techniques are not emphasized.

In my opinion, the average internship as an educational experience is far from satisfactory. Space does not permit a detailed discussion of criticisms, but I will mention the three that are in line with this paper: (1) The intern does not take an active enough part in the day-to-day care of patients, (2) his experience has little to do with the care of ambulatory patients, and (3) he sees too much emphasis placed upon specialty techniques and procedures. I feel that too many hospitals utilize interns as "cheap help" to the total disregard of the intern and the theoretical reasons for the internship. The aims of the internship should be reviewed by a responsible body, all internships should be reevaluated and all hospitals that cannot qualify in the light of this reevaluation should discontinue their intern programs. The internship at the Colorado General and Denver General hospitals has been reorganized with the idea of obviating the above criticisms.

I have mentioned before that the basic training of all medical students up to and through the internship should be as if general practice were the only goal. I feel the time is at hand when we must realize that the four years of medical school and an additional year of internship will no longer qualify a physician to assume responsibility for a reasonably safe and effective independent professional activity. This preliminary training, therefore, should be looked upon as a prerequisite for graduate work, regardless of the field in which the graduate work is to be done. Preparation for general practice should be anticipated as graduate experience on a par with that which is currently considered necessary for the various specialties. Since the general practitioner in our mountain or desert areas may be required to function differently from one in a large city, the organization and conduct of our general practice graduate program is individualized to accommodate our local problems. This is in line with our philosophy that the work and program of every medical school should be oriented to the community it serves.

We have just established a department of general practice, headed by a well-qualified general practitioner. This department will be responsible for the admission examination of all patients entering our clinic or hospital system. Reference to specialty clinics will depend upon this careful admission examination. Clinics in general medicine and surgery will be operated by this department, and members of the general practice staff will share in the care of patients upon the medical and pediatric wards. Conversely, our specialty departments co-operate in the general practice training program by accepting the residents for specified periods of time.

An attempt is made to individualize these assignments to meet the needs of our concept of general practice. All our residents, regardless of the field in which they are being trained, are registered in the clinical division of the graduate school and are encouraged to work toward graduate degrees.

As the result of cooperation with the Colorado State Medical Society and the Colorado State Hospital Association, arrangements have been made for the general practice residents to spend the last six months of their three-year program in qualified rural hospitals. The Committee on Medical Education and Hospitals of the Colorado State Medical Society has set up the minimal standards for rural hospital participation and will take care of the necessary inspection, certification and supervision. Teams of teaching physicians will visit these hospitals at regular intervals. The organization and supervision of this activity will also be the responsibility of the Medical Society committee.

With this as the setting for our residency in general practice, the three-year program is described briefly as follows:

The program is arranged so that each year-unit need not occur in any definite relationship to another.

One Year:

Medicine—eight months. (During this period a series of well-organized symposia and seminars is conducted with the idea of providing a practical review of the applied sciences basic to medicine. Psychosomatic medicine is particularly stressed.)

Pediatrics—four months (including work in the out-patient department).

Another Year:

Obstetrics and gynecology—five months (including work in the out-patient department).

Public Health—one month.

Assignment to rural hospital—six months.

Another Year:

Surgery—12 months (divided equally into four-month periods: fractures, emergency operations and ward assignments).

It should be noted that our department of psychiatry maintains a psychiatric service which limits its activities to the medical, surgical, pediatric and obstetric wards of our general hospitals. All our interns and residents are encouraged to evaluate every patient from the personality and emotional standpoint and to see that psychosomatic problems receive proper therapeutic attention. The psychiatric staff assigned to the general hospitals provides the supervision essential to this activity.

As soon as we began to receive applications for our general practice residency, we were struck with the frequency with which the applicants indicated that they did not desire surgical training other than that which was diagnostic, and that in its place they desired more training in general medicine. This has pleased us very much, as it is our feeling that in the

not too distant future the average general practitioner will not be doing surgical operations or handling obstetrical cases. Consequently, we have provided an alternate third year so that those residents who do not desire the surgical training and rural hospital assignment may take additional training that is non-surgical in nature:

Alternate Third Year:

Psychosomatic medicine—three months.
General out-patient medicine—three months.
Physical medicine—one month.
Industrial medicine—one month.
Pediatric out-patient—three months.
Public health—one month.

Our general practice residency program is in the third year of its development. As would be expected, our ideas and approach are frequently changing as we manipulate the program. Consequently, there must be no surprise if what I have described above should be changed in the next few months. As of July 1, 1948, there were 14 general practice residents in training, and we hope that by 1951 we will be able to support a set-up which will carry approximately two to three times this number.

In order to complete the picture for the training of the general practitioner, postgraduate education obviously deserves consideration. We have been gratified by the increasing demand on the part of the general practitioners of our community for post-graduate work. It is well recognized that the best medicine is practiced where medicine is being taught. Consequently, we subscribe to the principle that we should integrate as many teaching physicians into our activities as possible. The participation of the staffs of rural hospitals in our residency training program is of the first importance in this regard. The stimulation which these staffs will receive from teaching residents and from the periodic visits of teaching teams constitutes excellent extra-mural postgraduate training.

At the request of our general practitioners, we are developing short refresher courses which cover specialty fields from the general practitioner standpoint. A recent one in obstetrics and gynecology was particularly successful. The course lasted two days. Five to ten minutes was taken by a competent teacher to present just one practical point. This was frequently followed by a demonstration and always by a general question and discussion period, following which another single consideration was taken up

in a similar manner. This rapidly moving type of instruction very largely eliminated the fatigue common to the usual lecture type of program.

General practitioners are also coming to us with the request that arrangements be made for them to take individualized periods of training in some particular field. For example, one general practitioner has just finished spending six months with our division of psychosomatic medicine, and another is currently taking the same training. Many general practitioners are regularly spending from a half to a full day in our clinics as special students.

I am glad to know that a special committee of the California State Medical Society, with a salaried part-time chairman, is giving special consideration to the problem of developing a postgraduate program for its members in general practice, and we in Colorado will be most interested to compare notes from time to time.

The training of general practitioners is intimately tied up with the broad problems of medical care. A well-balanced system of medical care, whether it be urban or rural or depend upon group or individual practice, should in our opinion, hinge upon the physician who is qualified to take continuing responsibility for the individual patient. This physician, actively interested in preventive medicine, capable in diagnosis and appreciative of his limitations, can certainly fill an assignment that can be looked upon as one that is just as dignified and honorable as that filled by any specialist. This physician's most important job should be to keep his patient well and to make hospitalization as infrequent a necessity as possible. When serious or disabling illness strikes in spite of his efforts, he is the one to follow the patient, if necessary with the help of specialists, and to continue with his observation through the convalescent period with the aim of minimizing the chances of relapse, chronicity or disability. We should all realize that his maximum effectiveness will depend upon training and skill comparable to, if not greater than, that necessary for the practice of any of the specialties.

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Spontaneous Pneumoperitoneum

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SUMMARY

Spontaneous pneumoperitoneum most often occurs following ruptured peptic ulcer. In 80 to 85 per cent of cases of perforated ulcers, free intraperitoneal air is demonstrable. There have been reported three cases in which air was present without demonstrable cause, without peritoneal irritation or peritonitis. This presentation adds a fourth.

Examination of a patient with acute disease of the abdomen should include not only a roentgenogram with the patient supine but films made in the left lateral decubitus position and/or upright position to demonstrate free air. The radiologist should be ready and willing to consult with the surgeon at the time of examination. Attention is called to a sign described recently by Rigler in supine films, namely, the visibility of both the inside and the outside of the intestinal lumen. Another sign in the supine film, namely the contrast of air against the peritoneal reflections, is described.

PNEUMOPERITONEUM means simply free gas within the peritoneal cavity. It is induced therapeutically for pulmonary tuberculosis or tuberculous peritonitis or diagnostically to provide contrast for the intra-abdominal organs. The first mention of pneumoperitoneum in the literature was by Kelling⁵ in 1902 who suggested its induction for diagnostic purposes. Many others since that time have treated this phase of the subject. This presentation will be concerned with spontaneous pneumoperitoneum.

Popper¹¹ in August 1915 first called attention to the possibility of pneumoperitoneum in ruptured peptic ulcer. Four years previously he had observed a patient with clinical symptoms suggesting peritonitis due to perforation, followed by spontaneous recovery. An x-ray study eight days following the acute episode demonstrated free air above the liver. In April 1915 Wieland¹⁶ had found a similar sign in a patient with perforated ulcer, but necropsy showed that this radiolucent zone above the liver was due to transverse colon. In 1916 Lenk⁶ observed the significance of free intraperitoneal air

in penetrating wounds of the abdomen in soldiers. In the next few years many single cases of pneumoperitoneum were reported. During the past two decades a number of articles have been published reporting relatively large numbers of perforated ulcers in which the value of pneumoperitoneum in diagnosis was established.

CAUSES OF SPONTANEOUS PNEUMOPERITONEUM

The most commonly recognized cause of spontaneous pneumoperitoneum has been that of perforated peptic ulcer. This is so important a cause that Johnson⁴ in 1937 felt that spontaneous pneumoperitoneum was pathognomonic of perforated peptic ulcer. Most observers who reported on the subject in the 1920s found that pneumoperitoneum could be demonstrated radiologically in from 81.8 per cent to 85.7 per cent of patients with ruptured peptic ulcers. A single exception was Warfield's¹⁵ series of 35 cases reported in 1929 in which free air was shown in 43.5 per cent. He felt that the lower percentage was due to increased use of radiography and increasing acumen of the clinician. However, Thaxter's¹⁴ report, which was published as recently as 1940, agreed with the majority of the earlier reports.

An analysis of the records at the White Memorial Hospital for the ten-year period from 1936 to 1946 reveals among 84,441 hospital admissions a diagnosis of ruptured gastric ulcer 41 times and of ruptured duodenal ulcer 18 times, or a total of 59 ruptured peptic ulcers. Of the patients with gastric ulcers 37 were men and four were women. Of those having duodenal ulcers, 17 were men and one was a woman. This is in keeping with the higher incidence of ruptured ulcers among males reported in all other series. In 20 of the 41 cases of ruptured gastric ulcer, radiologic study of the abdomen was made at the time of the perforation. Sixteen, or 80 per cent of the studies showed evidence of free intraperitoneal air. Of the 18 patients with perforating duodenal ulcers, nine had x-ray examination at the time of the perforation, and in seven of these cases, or 77 per cent, there was evidence of free air. These percentages agree well with those given by the majority of observers reporting on this finding.

Other less common causes of spontaneous pneumoperitoneum have been described. Among these are carcinoma of the stomach, typhoid ulcers, tuberculosis of the appendix, perforated appendix, rupture of distended loop of bowel following obstruction or trauma, perforation of stomach by gastro-scope, perforating abdominal wounds, rupture of urinary bladder, rupture of colon diverticula, and "pneumatosis cystoides intestinalis." At the White

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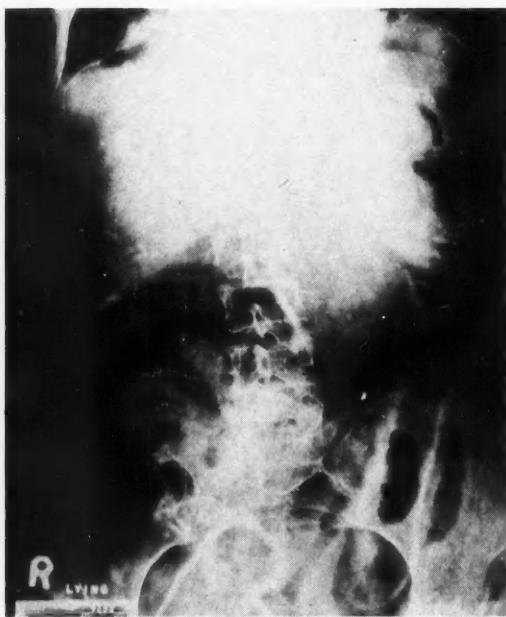


Figure 1.—The patient, an 86-year-old female, had a large rent in the stomach after eating a heavy meal. The exact cause was not found. Note, in the lower right, the large cecum with both inner and outer walls visible. This is a supine film.

Memorial Hospital, two cases of carcinoma of the stomach, and one case of perforation of diverticulum of the colon in which free air was demonstrated have been observed. Massive pneumoperitoneum was also seen in an aged woman who had an apparently spontaneous rupture of the stomach after a heavy meal (Figures 1 and 2).

To be considered in differential diagnosis is pneumoperitoneum which may be unintentionally induced. Some air almost invariably remains in the abdomen following laparotomy, especially if the surgeon has pulled up the anterior abdominal wall in an effort to secure the last suture. Pendergrass and Kirk¹⁰ stated that air can be demonstrated for a period of 24 hours or more in 60 per cent of patients who have undergone laparotomy, and Rigler¹² stated that air may be observed for as long as three weeks following such procedure. Banyai¹ and others showed that pneumoperitoneum may complicate therapeutic pneumothorax in the treatment of pulmonary tuberculosis either by direct insertion of the needle through the diaphragm into the peritoneal cavity or possibly by way of the diaphragmatic hiati. It may also occur by way of the uterus as in the Rubin test, or the woman herself may induce it by the use of the bulb syringe or by using a gas-forming douche.

SPONTANEOUS PNEUMOPERITONEUM WITHOUT DEMONSTRABLE CAUSE

Hinkel³ reported a case of spontaneous pneumoperitoneum without peritonitis, demonstrable vis-

ceral perforation or exogenous origin. He was able to collect only two such cases from the literature, one described by Moberg⁸ and the second by Monod and Holliander.⁹ In Moberg's case, the patient was an 81-year-old female with severe vomiting. Autopsy disclosed scirrhous carcinoma of the pylorus with stenosis but without perforation or peritoneal irritation. Monod and Holliander's case was that of a 35-year-old man with clinical signs of obstruction. At operation the gas escaped from the peritoneum with a hissing sound, but no peritoneal inflammation, intestinal obstruction, or other pathologic change was found. The patient recovered quickly. In Hinkel's case, the patient was a 70-year-old female with sudden severe pain in the epigastrium and lower chest aggravated by breathing. There was a history of dry cough for 15 years. The chest was limited in expansion and hyper-resonant on the left. The abdomen was distended and tender but not rigid. Roentgenograms revealed a large pneumoperitoneum below both diaphragms with elevation and some fixation of the left diaphragm. Roentgenograms following barium meal and enema were reported normal. Bronchography disclosed slight pooling of lipiodol at the left base against the elevated diaphragm. This pooling was thought to indicate emphysematous bullae. The patient was asymptomatic after two weeks, and was well one year later. The air remained in the peritoneal cavity for 21 days which suggested to Hinkel that the inlet remained open or reopened at intervals, since he thought the long duration precluded a single episode of air admittance. He felt that the emphysematous bullae at the diaphragm might have been responsible.

Rigler¹² described a patient in whom pneumoperitoneum was demonstrated on gallbladder films, but without material symptoms and without clinical evidence of perforation. Whether this truly represented a spontaneous pneumoperitoneum without demonstrable cause cannot be established as the patient did not return for further observation.



Figure 2.—Same patient as in Figure 1. Note the huge pneumoperitoneum. The balloon-like shadow at the left of the illustration is the cecum.

Maxfield and McIlwain⁷ described a patient with spontaneous pneumoperitoneum found at fluoroscopy in a routine gastro-intestinal study. Five days previously he had suffered an attack of acute indigestion lasting for a few hours, followed by spontaneous remission and relief. A duodenal ulcer was demonstrated radiologically. This case may well be an example of what Singer and Vaughan¹³ described as a "former frustus" type of perforated peptic ulcer in which the symptoms quickly abate following the perforation, due, they feel, to rapid sealing or plugging of a tiny perforation. The patient had a demonstrated duodenal ulcer, so that it is possible for a small perforation to have occurred and quickly sealed itself.

To these reported cases of spontaneous pneumoperitoneum, for which the source of the air was not found, the authors would like to add an additional case.

CASE REPORT

The patient, a woman 81 years of age, entered the hospital complaining of increasing distention and abdominal pain for one week. The patient, when first observed, was semi-comatose and felt little pain. She had had previous similar, but much milder, attacks. The patient had a left inguinal hernia, and had had a stroke.

Examination: Upon examination, severe distention of the abdomen was noted. The abdomen was tympanitic and tense; no masses were palpable. There was no audible peristalsis, and the patient complained of no pain at that time. The blood pressure was 146 mm. of mercury systolic and 98 diastolic. Pelvic examination showed no evidence of pelvic masses. The leukocyte count on admission was 22,100 with 89 per cent neutrophils, of which stabs were 16 per cent. The urine

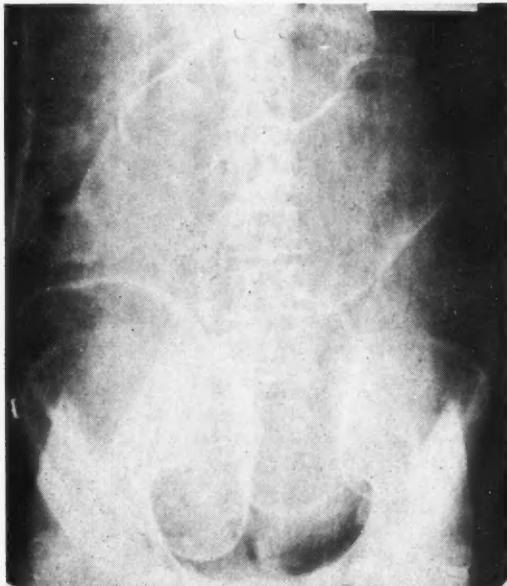


Figure 3.—Massive pneumoperitoneum in a patient without demonstrable cause (see text). Note the visibility of the outside as well as inside of the greatly distended large bowel. Note the air contrast along the lateral peritoneum. (Supine film.)

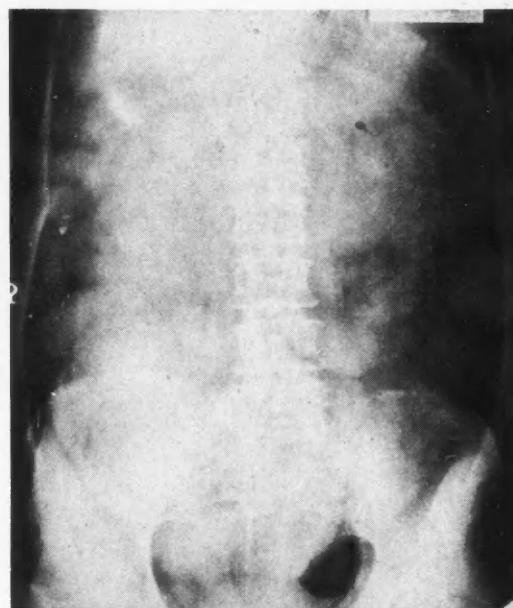


Figure 4.—Same case as shown in Figure 3. Deflation of the bowel after enema. The massive pneumoperitoneum is well seen against the lateral peritoneal walls. (Supine film.)

showed a two plus reaction for albumin, numerous pus cells and occasional erythrocytes; no sugar or other pathologically significant components were found. X-ray examination disclosed a very large area of pneumoperitoneum visible even on the film taken with the patient supine (Figure 3). There was pronounced distention of the colon. An enema resulted in complete deflation of the colon as demonstrated on a subsequent film. The loops of small bowel could then be seen through the air, which outlined the peritoneal cavity (Figure 4).

The surgeon stated that puncturing the peritoneal cavity was like puncturing a toy balloon. Large quantities of entirely odorless gas rushed out and the abdomen then became flat. The abdomen was gently explored and no evidence of peritonitis or free fluid was found. Both the stomach and the cecal area were explored. The small bowel and colon were deflated and small. The cause for the pneumoperitoneum was not determined. A culture made of a smear from the peritoneal cavity revealed an occasional Gram-negative bacillus which fermentation test identified as *Escherichia coli*.

Following operation, the patient received transfusions, and a Levine tube was inserted for feeding. The postoperative temperature record indicated a daily rise to approximately 100°. This febrile course continued and almost two months later a rectal abscess was drained.

Discussion: As in Hinkel's case, this patient was never very ill as far as the abdomen was concerned. She was old and senile, had had a stroke previously and was therefore slow in recuperating. There was evidence of infection in that the white count was elevated and the patient continued to run a low grade fever. This would suggest that there may have been a perforation in the pelvic colon not observed at the time of operation, and producing no peritonitis. It is to be pointed out, however, that the rectal abscess which probably caused the fever was extraperitoneal.



Figure 5.—Upright film of a patient with ruptured gastric ulcer. Note small quantity of free air between liver and diaphragm.

TECHNIQUE OF EXAMINATION

The practice of having the x-ray films of the "acute" abdomen reviewed by the surgeon at the time of the examination, especially those made at night, and not reviewed by the radiologist until his later convenience, is to be deplored. The roentgen examination of the "acute" abdomen is of such importance that it should be made under the supervision of the radiologist, who should also be willing to render an interpretation at whatever hour needed.

The day of the single supine film examination in cases of suspected acute abdominal conditions is past. Since ruptured peptic ulcer must be considered in most cases of acute diseases of the abdomen, study should always be made for the demonstration of free air. Classically, the film for this study is made with the patient standing, and this still remains the most widely used method for the demonstration of air. The film area should include the diaphragms; however, many patients are too ill for this procedure, and occasionally if the amount of air present is small it may not be visible by this means. Under these conditions, a left lateral decubitus film should be made. For this the patient is placed on the left side, remaining in this position for 10 to 15 minutes to allow small quantities of air to rise. The examination is made with the central ray directed horizontally and the film placed so as to include the right lateral abdominal wall and the right diaphragm. The advantages of this position over the upright view are: (1) The patient is more comfortable during the examination; (2) allowing the pa-

tient to remain on his side should theoretically make it possible to demonstrate smaller quantities of air; (3) this position will decrease the chances of further leakage from perforations in the distal portion of the stomach and duodenum; (4) it allows the examination of patients too ill to assume the upright position.

During the past several years, the practice at the White Memorial Hospital is to have all patients with the diagnosis of acute disease of the abdomen examined radiographically in three positions—flat supine, left lateral decubitus, and, if possible, upright.

X-RAY FINDINGS

The usual x-ray findings of free intraperitoneal air are well known. They depend to some extent on the amount of gas present in the peritoneal cavity. Friedman² thought that as little as 50 cc. of gas might be visualized on the radiograph. Rigler,¹² in working on cadavers, was able to demonstrate as little as 5 cc. of air, and with 20 cc. there was no doubt about air being present.

In the usual instance, it is not difficult to demonstrate a somewhat sickle-shaped rarefaction between the diaphragm and the liver representing the free air which has collected there. When there are large quantities of air the space between the liver and the diaphragm may be considerable. However, very small quantities of air are just as diagnostic as the larger amounts and should not be overlooked (Figures 5 and 6).

Rigler has described a sign of pneumoperitoneum seen in the supine films. This sign consists in the visibility of both the inner and outer walls of the bowel. It occurs only if there are large quantities of gas present. He described the sign as occurring most commonly in perforations of the colon. In the cases in which the authors have noted this sign, the perforations were in the stomach or duodenum. Another characteristic sign which is sometimes helpful has been noted, and that is the demonstration, in the lateral aspects of the supine film, of the



Figure 6.—Same patient as in Figure 5 in right lateral decubitus position. The free intraperitoneal air is seen laterally.

presence of air adjacent to the peritoneum or overlying the liver shadow (Figures 3 and 4). This is not as frequently seen, or as easily recognized, but when present should arouse suspicion of the presence of free air and lead to additional views such as the upright or lateral decubitus. It is well to keep these two signs in mind when viewing the supine film, since the authors have observed several cases in which the presence of a perforation was missed by competent radiologists who apparently were not aware of these signs or did not properly interpret them.

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Discussion by L. H. GARLAND, M.D., San Francisco

The diagnosis of pneumoperitoneum is relatively simple in well established cases, and the methods suggested by the authors are fully concurred in. However, differential diagnosis of very small amounts of air from collections of fat under the diaphragm is not always a simple matter. Projections in two different planes are of aid in reaching this differentiation.

For most patients with a clear-cut clinical diagnosis of ruptured ulcer, a single left lateral decubitus film made with a horizontal beam is usually all that is necessary. These patients need not be disturbed in order to make additional upright or supine films. However, when there is any question concerning the presence of free air, then additional views should be made.

We cannot share the authors' enthusiasm for bowel visibility as a useful sign. In the text of their article they point out that this is usually seen only with massive collections of air; it is therefore usually a late sign.

We have seen one case of idiopathic or cryptogenic pneumoperitoneum, that in a female who gave a history of taking vigorous knee-chest position exercises on the advice of a cultist. This finding was observed on two different occasions and needless to say caused considerable surmise.

As neither alimentary tract ulcer nor colon diverticulum was demonstrated, presumably the air gained admission via the fallopian tubes.

Accuracy in roentgenographic technique, plus consultation with the radiologist *prior* to the examination, will assure an even higher percentage of accurate diagnoses of pneumoperitoneum than is at present experienced. The authors are to be congratulated for emphasizing this point.



Operation for Congenital Cataract

OTTO BARKAN, M.D., San Francisco

SUMMARY

The traditional treatment of needling or discussion of congenital cataract or membrane is open to many serious objections. Removal of the cataract by a modified form of linear extraction is recommended. The technique, with recent improvements which further assure extraction without hazard in early infancy, is described.

THE subject of congenital cataract is given relatively little space in textbooks of today. The traditional treatment of needling or discussion, often repeated, is generally employed. Needling is open to many serious objections such as the danger of chemical irritation and secondary glaucoma, which not uncommonly necessitates further operation upon a highly inflamed eye. Other objections are protracted convalescence, the frequent necessity of repeated discussion in order to complete resorption, and delayed restoration of vision in young subjects, with resultant amblyopia. Retinal detachment not uncommonly occurs in adult years as a result of repeated discussion in early childhood.

Ziegler recommended the through-and-through incision, hoping to prevent secondary glaucoma. According to Spaeth¹ a through-and-through incision of the lens into the vitreous is not a guarantee against the development of secondary glaucoma; instead, damage may occur to the vitreous with later iridocyclitis, chronic in type, and even retinal separation.

Elschnig and Hess² recommended removal of the lens by "linear extraction" when the infant is three months of age for the relief of total cataract and at six months or later for partial cataract. Because of its danger, "linear extraction" was not generally accepted. A technique of "linear extraction," modified to avoid the danger and to permit safe removal of congenital (and membranous) cataract in infancy as well as later, was suggested in 1931 by the author of this presentation.¹ Favorable aspects of the technique were confirmed by Green and Beisbarth.³ Additional modifications which have been introduced in the interval are given in the present article.

The essence of the procedure is to dilate the pupil maximally with atropine instilled for four days preoperatively and again with adrenalin 1:1000 by subconjunctival injection.

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tion at operation. Thus the margin of the pupil comes to lie peripheral to the inner wound lip of the keratome incision. The incision is made obliquely in the cornea 1 to 1½ mm. axial to the corneoscleral border, and in a plane parallel to that of the iris. Designed as a trap-door or valve incision which is watertight and airtight as regards the contents of the anterior chamber, it prevents outflow of fluid or air and encourages rapid reformation of the chamber. This effect combined with maximal dilation of the pupil and the hypotony induced by adrenalin (dynamic since it is partly due to stimulation of the sympathetic) tends to prevent the iris from contacting or adhering to the inner wound lip. Inasmuch as anterior adhesion of the iris nevertheless occurred in some cases, a precautionary measure was instituted. This consists of postoperative reestablishment of the anterior chamber by means of injection of physiological saline solution through a prelaid corneal puncture. The patient leaves the operating table with the chamber fully reformed. Since this modification has been added to the original procedure there has been no instance of anterior adhesion. Cordes* recently injected a bubble of air postoperatively for the same purpose. The bubble is so placed, by positioning of the head, that contact of the iris with the inner wound lip is discouraged. The bubble of air may be combined with the saline injection.

In case a secondary membrane forms, it is suggested that this should not be "needled" or dissected. If the membrane is delicate it may be removed by gentle traction with the smallest capsulotomy forceps. If thick and tightly adherent, it may be cut at right angles to the line of traction with scissors of the Barraquer type. Both maneuvers can be performed with a high degree of safety by means of the surgical technique outlined in the preceding paragraph.

The absence of complications and the smooth convalescence are striking in contrast to the delay and complications of discussions. The establishment of clear media in early infancy is advantageous. No late complications such as retinal detachment have been encountered. There has been no case of sympathetic ophthalmia.

In the case of binocular total cataracts it is suggested that surgical intervention be started at the age of three months. After successful operation on one eye the other should be operated upon without delay. In the author's experience corrective glasses have been worn postoperatively with satisfaction in several cases at the age of four and five months. Since experience has shown that no useful purpose is accomplished by early operation in cases of monocular cataract, it is recommended that operation in such cases be deferred until a later age when full cooperation of the patient is obtainable.

*Personal communication.

SURGICAL PROCEDURE

A drop of 1 per cent solution of atropine sulfate is instilled once a day for 4 days in the eye to be operated upon. Pediatric examination, including a roentgenogram of the chest to determine if the thymus is enlarged, is performed in all cases. In the case of infants the usual diet is maintained up to six hours preoperatively; sugar solution is forced up to four hours to avoid dehydration with associated hyperpyrexia.

General anesthesia is used in infants and in children up to the age of 12 or 14 years. In view of the delicacy of the operation as applied to infants only a few months old, who may have other congenital defects, the importance of carefully conducted anesthesia cannot be overemphasized. An injection of atropine is given 45 minutes before operation. Ether is administered through a suitably small airway. Since the patient's face is covered with an eye sheet and the operation may take a long time, care must be taken to assure an adequate supply of oxygen at all times.

Before the surgeon scrubs and the patient is draped, two to four minims of adrenalin 1:1,000 are injected at several points along the upper limbus with a No. 30 one-half inch needle attached to a 1½-inch luer syringe (Figure 1). The intraocular action is increased by making the injection as close as possible to the corneoscleral border. The injection is facilitated by inserting the opening of the needle, facing the bulbus when puncturing the conjunctiva. It is best to inject the major portion at 12 o'clock in the meridian contiguous to the point of corneal incision. Akinesis and a retrobulbar injection of 2 per cent novocain are given, and the eye prepared in the usual manner. The face mask should be of moistened gauze so that it may be easily molded to the region.

After 10 to 15 minutes the pupil is maximally dilated so that it almost disappears behind the limbus and hypotony has developed. The dilation, being due to a contraction of the sympathetic dilator fibers, is tonic, in contradistinction to the paralytic dilation of atropine. The iris consequently maintains an exaggerated contractility which keeps it retracted from the wound and prevents it from prolapsing. The hypotony of the bulbus induced by adrenalin is such that the usual tendency of the ocular contents to prolapse is reduced. The tendency to prolapse is further discouraged by making the keratome incision oblique and within the cornea.

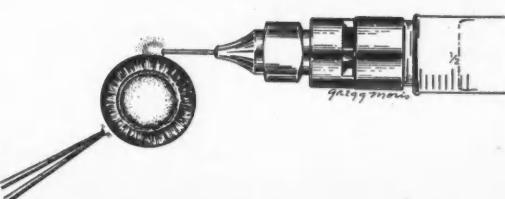


Figure 1.—Injection of Adrenalin 1:1000.



Figure 2.—Corneal puncture.



Figure 3.—Corneal incision and capsulectomy forceps.

Adequate exposure is provided by canthotomy and by lid sutures, six to eight in number, of No. 6 "0" black silk placed along the ciliary margins of the upper and lower lids. They are held by mosquito forceps. The superior rectus is controlled by a bridle suture of No. 6 "0" black silk.

Illumination and magnification are important. In the cases of membranous cataract, the focal illuminator will eliminate annoying reflections.

In preparation for the later deepening of the anterior chamber, a corneal puncture is made tangentially, 1 mm. axial to the corneoscleral border at 9 o'clock on the right eye and at 3 o'clock on the left eye after the site has been touched with an applicator dipped in tincture of iodine (Figure 2). The bulbus having been fixed by a Bishop-Harmon forceps at the opposite limbus, the puncture is made with a dissection knife which has been dipped in fluorescein to mark the site. The wound canal should be at least 2 mm. long so that it will be air- and watertight. The tip of the knife should barely perforate Descemet's membrane as observed through a head loupe. It may be necessary to tip the blade backward a little in order to perforate the membrane. Care should be taken not to enlarge the puncture in removing the knife.

The corneal incision is made with a keratome at 12 o'clock, 1 to 1½ mm. axial from the corneoscleral border. It is placed obliquely to the corneal surface and parallel to the plane of the iris, thus forming a valve or trap-door incision so that the greater the pressure within the anterior chamber the greater the tendency for the incision to close. It should be no larger than necessary for the extraction of the lens matter or membrane as the case may be. Excessive obliquity may interfere with freedom of intraocular instrumentation but the size and obliquity can be adapted to the needs of the individual case to achieve an optimum of freedom of instrumentation, deliberate manipulation, security of healing, and elimination of hazards (Figure 3).

A number of different instrumental procedures have been described for the extraction of the various forms of congenital cataract and membranes. It is



Figure 4.—Deepening of anterior chamber.

beyond the scope of this presentation to more than touch upon them. Depending upon the type of cataract or membrane to be operated upon and the preference of the surgeon, capsulectomy forceps, cystotome, narrow Hess shovels, irrigation, blunt hook and small delicate Barraquer scissors may be used. The various types of congenital cataract and their surgical implications have recently been described in a comprehensive review of the subject by Cordes.*

At the end of the operation the anterior chamber is deepened in the following manner: The corneal puncture which was prelaid with a dissection knife and stained with fluorescein is touched with a dry applicator and with one dipped in tincture of iodine. With a No. 30 needle (previously drum-tested or examined under a loupe to assure its having a perfect point) attached to a 1½ cc. luer syringe, intravenous saline solution is injected, the surgeon fixing the bulbus at the contralateral limbus (Figure 4). (Air may be injected in the same manner, according to Cordes.) It is important that the anterior chamber be deep at the time the patient leaves the operating table.

The usual measures for postoperative care, consisting of binocular pads, eye shield, and arm restraints, are carried out. Elixir phenobarbital is administered.

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Discussion by FREDERICK C. CORDES, M.D., San Francisco

We are indebted to Dr. Barkan for the introduction of his modification of the linear extraction. The procedure has justified itself in the years since its original presentation. The refinements in technique which Dr. Barkan has presented add further to its effectiveness. The operation is not difficult, but too much emphasis cannot be placed upon the care with which the details must be carried out.

In the surgical treatment of congenital cataracts it is important to remember that 50 per cent of the patients have other congenital anomalies and that therefore the prognosis must be guarded.

As a rule, visual acuity of 20/40 or better would seem to be a sufficient contraindication for operation. In some instances, as in the lamellar cataract, the opacity may increase in density so that operation later becomes necessary.

*To be published.

In those cases of bilateral congenital cataract where the opacities are sufficiently dense to interfere with the development of fixation, the first eye should be operated upon at six months so that the child may develop this faculty and thus avoid nystagmus. The second eye should be operated upon between the second and fourth year. It is well to remember that only approximately 50 per cent of the patients develop postoperative vision of 20/100 or better.

My personal choice of operation in most cases is the slightly modified form of the linear extraction advocated by Dr. Barkan.

After the routine preparation and anesthesia two minims of adrenalin 1:1000, are injected subconjunctivally at the limbus above. After ten minutes the pupil is maximally dilated and remains dilated even after the anterior chamber is opened. This, as Dr. Barkan states, prevents the iris from coming into contact with the incision before the anterior chamber is formed.

A suture is used through the tendon of the superior rectus as an aid in fixation.

Before making the incision a stab wound is made at the lower temporal limbus with a straight capsulotomy knife-needle to facilitate the injection of air into the anterior chamber after completion of the operation. If introduced parallel to the iris surface there will be no loss of aqueous. The site of puncture should be marked with gentian violet.

The operative procedure that I use follows that given by Dr. Barkan. Following the extraction of the lens, air is injected into the anterior chamber.

With a small luer syringe and a fine needle (28-30 gauge), the tip of which has been dulled a bit, air is injected into the anterior chamber until it has a normal depth. This injected air, which remains for several days, prevents the formation of anterior synechia and firmly closes the wound. The usual postoperative care is employed.

Complications: The complications encountered are not many and, to a great extent, can be prevented. Of importance is the injection of adrenalin and the necessary wait of ten minutes until the pupil is widely dilated so that the iris is not in the way.

The importance of the incision being parallel to the surface of the iris cannot be stressed too much, for it is this angle that produces the valve-like opening which seals firmly from the pressure within, and is a factor in preventing prolapse of the iris or opening of the wound by postoperative squeezing.

Vitreous loss is infrequent and, when it does occur, usually results from attempting to remove the last bit of lens substance. It is well to remember that when the major part of the lens has been removed there is little to absorb and this absorption occurs in short time, even in those cases in which the lens is relatively immature. It is important not to "do too much."

The most serious objection that has been made to the operation is the development of anterior synechia, or iris incarceration in the wound, with the resultant drawing up of the pupil, which may at times be accompanied by glaucoma. The injection of air immediately following the operation seems to prevent this, as in no instance where this has been done has there been any iris incarceration.

Secondary glaucoma has occurred only once, and this in a 12-year old boy with a lamellar cataract that had increased in density to the extent that it caused sufficient loss of vision to necessitate operation. No difficulty was encountered in opening the wound and washing out the lens debris. The final result was 20/30 vision.

In certain types of congenital cataract, particularly the congenital membranous cataract, the discussion as advocated by Wheeler is indicated.

In the disk-shaped cataract, where there are two types present (membranous central portion and peripheral soft

cataract), a discussion followed later by an incision through the membrane with Berens or de Wecker scissors is usually necessary.

In rubella cataract, in addition to the possibilities of other anomalies being present, it is well to remember that the absorption of the lens substance is slower than it is in the case of the usual congenital cataract. In most instances it is difficult to dilate the pupil with any of the mydriatics.

The surgical treatment of congenital cataracts is a grave responsibility, as the outcome of the operation is instrumental in determining the individual's future position in society. A thorough knowledge of the types of congenital cataracts, combined with a detailed study of the case in hand, is important in deciding whether or not operation is indicated. If operative intervention is the decision this knowledge is useful in determining the age at which the operation is to be performed and the type of surgical procedure to be employed.

Discussion by DOHRMANN K. PISCHEL, M.D., San Francisco

In discussing Dr. Barkan's paper I wish to bring up the dangers inherent in the usual operation of discussion. The author mentioned the fact that retinal detachment frequently occurred in adult life as the result of repeated discussions in childhood. This cannot be stressed too strongly. Some very pessimistic statistics have recently come out of England, where one author reviewed the results of repeated discussions.

He came to the conclusion that well over half the eyes so treated became blind, largely from retinal detachment, between 20 and 30 years after the original operation. This certainly speaks in favor of some other form of operation for congenital cataract, and the technique described by Dr. Barkan is, I believe, to be highly commended.

Discussions or violent needlings of secondary membranes, or secondary cataract, also carry the danger of causing retinal detachments. I believe a needling should be done only if the membrane is very fine. In doing it, the needle should never be thrust through the membrane into the vitreous. The only safe way of doing a needling is to enter at the limbus, say at 3 o'clock, insert the point of the knife into the membrane, needle at 12 o'clock, then sweep the point downward towards 6 o'clock, but always keeping the instrument in the plane of the iris, never pushing the knife needle back into the vitreous. The point actually can lift the membrane forward, away from the vitreous.

If the membrane is at all dense, the only procedure which is safe is cutting it with scissors after making a keratome incision as described by Dr. Barkan. Here again, the scissors must be kept out of the vitreous as much as possible and all traction must be avoided. I recommend this technique very highly. I question the advisability of pulling out a membrane, no matter how delicate, except as a last resort, as I am fearful of fine strands running peripherally behind the iris, and ending in the retina. Traction on a membrane can thus be transmitted directly to the retina, causing a hole to be torn in it, thus precipitating a retinal detachment.



Pediatric Anesthesia

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SUMMARY

Induction of anesthesia in infants and children presents many problems not present in procedures for adults. Anesthetists may better serve the patient by visiting with him on the eve of operation, not only to establish friendly relations to avoid rebellion, but to form a basis for decision as to what anesthetic agent to use and by what method it should be given. As the kind of operation and the difficulties to be expected with each are large factors in the choice of agent and technique, a number of operative situations are reviewed from this standpoint.

THE staffs of pediatric hospitals fit themselves into the child's world and on the whole the pediatric hospital lacks the solemn quiet atmosphere of the adult institution. One often sees brightly colored murals, children playing with toys, and hears a radio or phonograph. In addition, there is lively chatter between the children. Hospitals employ play therapists, occupational therapists, and school teachers, all of whom help to maintain the normal atmosphere of the child.

A further improvement has been the increased interest in the patient before and after anesthesia. No longer does the anesthetist appear in the operating room solely to give the anesthetic. It is customary in an organized department to have the anesthetist visit the patient the night before operation, have a friendly chat and gain the little patient's confidence. Children are intensely interested in stories of sport, and in the case of the young child, the subject of Santa Claus is a happy selection.

Over the years it has been learned that it is important to correct any fluid or nutritional imbalance. If the operation is elective, a good night's sleep prior to operation is beneficial to the patient. A barbiturate administered the night before accomplishes this purpose. If it is given orally, the bitterness should be concealed in a generous portion of corn syrup. Smaller children may be given a barbiturate suppository. Solid food, which might be vomited and aspirated, should be withheld for six hours prior to operation. Sweetened liquids can be given up to two or three hours preoperatively. In most instances, the patient who has had a bowel

movement the day before operation does not require an enema. The exception, however, is the patient on whom rectal operation is to be done, with a possibility that feces would interfere with the operative procedure.

In regard to pre-anesthetic medication immediately before operation, some difference of opinion has arisen. Many anesthetists give no premedication to children under seven or eight years of age. Their aversion is due largely to the fear of dangerous depression of respiration. On the other hand, there is a rapidly growing group of those who believe that premedication in infants and children can give the same results as it does in adults. The advantages of the immediate preoperative premedication are decrease in fear and reduction in the amount of anesthetic agent required for anesthesia. This is attained with barbiturates or opiates. One of the belladonna group of drugs can be added to this, either atropine or scopolamine. Both atropine and scopolamine decrease secretions in the respiratory tract and help maintain the patency of the airway. Scopolamine also produces some amnesia of the operative procedure.

Since the anesthetist is aware of the type of operation, and is familiar with the patient's condition, he can make a decision the night before regarding the anesthetic agent and method to be used. It has been argued that there is perhaps one best technique for each case. The author feels that this is not strictly true—that there is usually a choice of three or four agents and methods, and that the breadth of choice depends upon the skill and the training of the anesthesiologist. Hitherto, open drop ether was thought to be sufficient and safe for most pediatric operations, such as tonsillectomies, herniorrhaphies, and appendectomies. It was found, however, that the open drop method was not suitable for intracranial, intrathoracic and intra-abdominal operations. Therefore it was found necessary to adapt to infants and children some of the improved anesthetic agents and methods used for adults. Consequently, we now have a wide variety of anesthetic agents employed. These include the inhalation agents—cyclopropane, ethyl chloride, ethylene, divinyl ether, ethyl oxide (ether), chloroform, and nitrous oxide; the local anesthetic agents—cocaine, metacaine, nupercaine, pontocaine, and procaine; the barbiturates—pentothal and evipal; the muscle relaxant—curare; the basal anesthetic agents—ether in oil, paraldehyde, and tribromethanol in amylen hydrate. Likewise, there is the same variety of anesthetic methods: open drop, semi-open, insufflation, and absorption (both to-and-fro and in circuit techniques). Moreover, today in inhalation technique the endotracheal tube is employed more frequently.

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Other methods, such as intravenous, rectal, topical, infiltration, field blocks and nerve blocks (cervical, brachial plexus, caudal, and even spinal) have found their way into the pediatric field. Almost all agents and methods that are employed for adult anesthesia have been used successfully in infants and children with almost comparable benefits to both patient and surgeon.

There are numerous operations on the respiratory tract in which the problem of anesthesia is complicated. For example, anesthesia for a tracheotomy may be difficult because of respiratory obstruction. However, much of this may be overcome if a small endotracheal tube is passed beyond the laryngotracheal obstruction and a patent airway established early and maintained. The insertion of the endotracheal tube usually relieves anoxia and passive congestion so that during the incision there is less bleeding. The method of administering the anesthetic can be any one of the usual inhalation techniques carried on through the endotracheal tube. After the completion of the opening in the trachea, the surgeon should infiltrate with a local anesthetic the skin around the tracheotomy incision. As the tracheotomy tube is inserted the endotracheal tube is withdrawn. Following this the administration of the anesthetic can be continued by insufflation through a rubber catheter inserted into the tracheotomy tube. The local analgesia, however, is usually sufficient to allow for the suturing of the skin.

Difficulties may arise during anesthesia for bronchoscopy. If the procedure is being carried out in infants for examination or aspiration, no general anesthetic agent is administered, but the infant is given high oxygen inhalations by bag and mask for three minutes prior to insertion of the bronchoscope. This will provide an adequate reserve of oxygen in the respiratory tract, circulating blood and other body tissues should laryngospasm or bronchospasm occur. Older children may be anesthetized in this way, after a thorough local anesthesia of the pharynx and larynx. The author usually gives nitrous oxide before and during the procedure.

Bronchoscopy for foreign body extraction is a different problem. It is true that the foreign body can be extracted under general anesthesia with ether; but ideal working conditions for the surgeon may be provided by giving a combination of nitrous oxide and oxygen, a small dose of intravenous pentothal sodium, and a comparatively large dose of curare sufficient to relax all the muscles and prevent any resistance. The accompanying respiratory depression or arrest would cause anoxia; but this can be avoided by delivering oxygen through the side-arm of the bronchoscope. If there are a few holes along the wall of the bronchoscope, then, even if it is inserted into one bronchus, gas can still flow into the other lung. The anesthetist may have to aid respiration by intermittent manual pressure on the upper part of the abdomen. If this is not sufficient he can put his thumb over the opening of the bronchoscope and inflate the lungs rhythmically.

During this procedure the chest should be watched closely so that there is no overdistention of the lungs.

The choice of a safe and satisfactory method of anesthetizing infants and children for bronchograms is always a problem. There are two main difficulties: first, the maintenance of a patent airway; second, the limitation to non-explosive agents. In the last few years the anesthetist has become increasingly aware of the dangers of explosive agents in the radiological department. In older children, the usual premedication of morphine and scopolamine is given. On the patient's arrival in the operating room a large dose of morphine is given intravenously. The pharynx and larynx are sprayed with 10 per cent cocaine or 2 per cent pontocaine. If the child is uncooperative, this spraying can be done alternately with nitrous oxide and oxygen inhalations administered with a bag and mask. The radiopaque catheter can be passed down through the nostril and inserted between the vocal cords by direct vision through the laryngoscope. In infants the procedure is exactly the same except that the morphine is omitted and the anesthesia must be maintained throughout with nitrous oxide and oxygen with bag and mask; otherwise, satisfactory films cannot be obtained. It is wise to have on hand an endotracheal tube and laryngoscope in case the air passage becomes blocked with the radiopaque substance. If this occurs the clean endotracheal tube can be inserted quickly.

OPERATIONS IN THE THORAX

Operations in the thorax in most infants and children should be done with an endotracheal tube in place. This prevents respiratory obstruction, and, with the closed absorption technique, permits of easy control of pulmonary ventilation. The endotracheal tube facilitates aspiration of tracheobronchial secretions. In the smaller infants, completely closed endotracheal absorption technique is not satisfactory. If the absorption technique is used it must be carried on as a semi-open system. In other words, an excess of gases is supplied. If absorption in circuit is used, it is important to be sure that the system is efficient and that there is no rebreathing. Usually the system is connected with a Neff water manometer so that overdistention of the lungs cannot occur. This manometer is set at approximately 12 cm. of water pressure. If the anesthesiologist controls the breathing by rhythmic manual compression on the breathing bag, any excess pressure will be reduced by the escape of the gas through the open arm of the Neff manometer. This system provides uniform inflation of the lungs. (Uneven expansion of the lungs is disturbing to the surgeon.) These principles apply to practically all intrathoracic operations. It must be kept in mind that lobectomies and pneumonectomies in children are often done for bronchiectasis, and there is a great deal of secretion that must be aspirated frequently throughout the operation lest the patient drown. Postural drainage and bronchoscopic aspiration immediately before operation are seldom completely adequate.

In arterioplasty, including repair of patent ductus, coarctation of the aorta, and tetralogy of Fallot, usually one lung is collapsed and the other must be kept ventilated throughout the operation.

In tetralogy of Fallot, the problem of acute anoxia is always at hand. In these cases constant vigil of the heart is important. Should the heart beats become slow and feeble, the surgeon should permit the anesthetist to inflate the collapsed lung in order to improve the oxygenation. This should change the sluggish heart beats to more rapid, vigorous contractions.

In all intrathoracic operations, at the time of the closure of the chest, the anesthetist attempts to inflate the lungs by pressure on the breathing bag. Negative intrathoracic pressure should be applied in all cases before the patient leaves the operating room. Gentle transfer from the operating table is important. Oxygen therapy should be administered continuously from the end of the operation until it is no longer necessary.

There are several operations in the region of the upper part of the digestive tract which are beset with hazards. (The term "digestive tract," as here used is in accord with the "Standard Nomenclature of Disease and Operations" of the American Medical Association.) Deaths have been recorded from cleft lip and palate operations and from tonsillectomy and adenoidectomy. Deaths from tonsillectomy are far more common than is generally known. For example, in figures tabulated by Bishop from the United States Bureau of Census, there were 542 deaths during tonsillectomy and adenoidectomy in 6,250 deaths which occurred on the operating table over a period of ten years. A large number of these deaths probably were due to obstruction to respiration. The popular method of anesthetizing patients undergoing these operations was to commence with open drop ether technique followed by ether insufflation, either through a mouth hook or through a nasopharyngeal catheter. With this method it is important to keep the patient in the Trendelenburg position so that the blood will not run into the trachea and obstruct it. Likewise, the mouth gag must not be opened too widely, for this also blocks the air passage. It is because of this difficulty with the patency of the airway that for the past six or seven years the author has used the endotracheal method, preferably the orotracheal. If the endotracheal method is used, tubes of the proper size must be inserted; otherwise laryngitis may follow the extubation. In fact, in over 20,000 intubations in infants and children, two tracheotomies were necessary postoperatively. One was performed the day following a tonsillectomy, and in the other, the operation followed injury to the left recurrent laryngeal nerve during ligation of a patent ductus. It is presumed that the paralysis of the left vocal cord together with some subglottic edema produced enough obstruction to endanger the patient's life. Tracheotomy was done within an hour of the operation and the opening was closed 48 hours later.

Recently, the author reported a series of 500 operations for cleft lip and palate with only three deaths. These too were done with endotracheal anesthesia. The endotracheal technique provided improved operative conditions for the surgeon. It must be remembered that the technique is not for the occasional anesthetist but for the expert. In infants under two years of age blood was supplied throughout these operations.

In operations for closure of a tracheoesophageal fistula, a different problem presents itself. In the first place, the operation is done during the first few days of life when pain sensation is at a minimum. Cyclopropane and oxygen blown over the face of the infant through the bag and mask provides adequate anesthesia; but an endotracheal tube and laryngoscope should be kept on hand in case of the sudden appearance of severe laryngospasm. In operating upon infants two or three days old, a new feature appears. These infants often lose body heat, and the body temperature may drop to 94° or 95° F. unless it is kept higher artificially. This can be done by placing the infant upon a blanket-covered perforated metal frame which is placed over hot water bottles. Falling temperature is not a problem in older children, in whom the body heat tends to rise during anesthesia.

PYLOROMYOTOMY FOR PYLORIC STENOSIS

A comparatively common operation in a pediatric hospital is pyloromyotomy for pyloric stenosis. The infant is operated on at about three weeks of age. Careful preoperative preparation with intravenous fluids and blood is a matter of great importance. Many surgeons prefer anesthetization by local infiltration of the abdominal wall in the region of the incision. Others, feeling that local anesthesia interferes with healing of the wound, prefer open drop ether, although in patients anesthetized by that method the intestine often bobs up and down elusively. Cyclopropane blown over the face through a bag and mask can also be used but is difficult to control. A safe method for the expert and one which gives excellent operating conditions is a combination of intravenous pentothal and curare with nitrous oxide and oxygen inhalation. An endotracheal tube may be employed and is a definite asset if some assistance to respiration is required. But again, the latter is not a method to be employed except by those well versed in pediatric anesthesia.

There are several other abdominal operations, such as anastomosis of the intestine, reduction of a volvulus, intussusception, choledochoplasty, appendectomy, and splenectomy, for which the patient can be anesthetized with the same agents and methods as outlined for pyloromyotomy. In older children, over five or six years of age, spinal anesthesia may be employed. In fact, in one pediatric hospital, spinal anesthesia is used in 10 per cent of the cases. Spinal anesthesia is usually combined with intravenous pentothal or a very dilute concentration of nitrous oxide in oxygen administered by bag and mask. In children the surgeon should not expect

the same contracted ribbon-like intestine that is seen in adults under spinal anesthesia. Perhaps the anesthetist is more cautious with children and keeps the level of analgesia lower.

Most urogenital operations can be accomplished with any of the anesthetic agents and methods used for adults. Caudal blocks and low spinal anesthesia can be used more frequently for these operations. In some cases circumcision can be satisfactorily done with a regional block at the base of the penis.

When operations on the endocrine system, thyroidectomy, thymectomy and adrenalectomy, are necessary for older children, the problems of choice of agent, method, and endocrine management are similar to those for adults.

With the rapidly growing group of trained neurosurgeons, neurosurgical operations such as craniotomy, cranioplasty, removal of subdural hematoma, and meningocele are increasing in number. Light anesthesia is required in these cases but a patent airway is essential. The so-called Ayre's open endotracheal method or the open valvular endotracheal method gives reliable results. Nitrous oxide and oxygen with the occasional addition of a small amount of ether is adequate for a light level of anesthesia. Proper oxygenation and carbon dioxide elimi-

nation, so important in these operations to prevent brain swelling, can be maintained for long periods of time. With these methods smaller endotracheal tubes can be used, which will materially reduce laryngitis following these protracted operations. Slightly different agents and methods must be used for anesthesia during encephalography because of the spark hazard. Intravenous and rectal pentothal and rectal avertin have been employed successfully. If the encephalography is not done by an expert, the patient may die during the procedure after only brief distress. Usually there is a slight coughing spell with sudden pallor and the patient dies in spite of immediate artificial respiration. This is more apt to occur in infants under one year of age.

There are many kinds of eye and ear operations in infants and children. Several of these are done under anesthesia induced with rectal avertin and with insufflation of nitrous oxide and oxygen through the nipple of a Waters' oropharyngeal airway. However, to avoid interfering with the surgeon's access to the patient's head, the endotracheal technique seems preferable, and it also gives a better guarantee of the patency of the airway.

Following operation, most patients are taken to a postanesthetic recovery room where they are carefully watched by nurses trained for this duty.



End Results of Thoracolumbar Sympathectomy for Advanced Essential Hypertension

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SUMMARY

In a six-year period from February 1942 to February 1948, 473 patients (185 males and 288 females) were operated upon for essential hypertension and most of them were in advanced stages of hypertensive disease.

Patients were selected or rejected for operation on the basis of a set of rules drawn to guide clinical judgment.

The total of deaths in and out of the hospital over this period was 79 or a total mortality of 16 per cent. There were 38 in-hospital deaths, or a mortality of 8 per cent. The causes of deaths occurring in the hospital were in the following order: cerebral accident, cardiac failure, and renal insufficiency. The out-of-the-hospital deaths were in the following order: cardiac failure, cerebral accident, and renal insufficiency.

Operations done early in the series followed the Smithwick procedure from T-9 through L-2, but later the minimal procedure was extended from T-3 through D-3, and in addition about 40 total sympathectomies which included the stellate ganglion were done. Results from the more extensive operations were better than those from the lesser procedure, but the mortality also was greater. Conclusion that complete or nearly complete sympathectomy is preferable to a less extensive procedure must await the collection of more data which can be used in weighing the respective end results against the mortality.

Thoracolumbar sympathectomy has a definite place in the treatment of hypertensive vascular disease, but its role in advanced cases is chiefly that of palliation.

THE surgical treatment of hypertension had its origin in the pioneer work of Crile,³ Adson and Craig,¹ Heuer and Page,⁶ Peet¹⁰ and others, but it was not until 1940 when Smithwick¹³ first reported his clinical studies that an efficient operative procedure was made known. The method described by Smithwick and employed by him for the past nine years includes removal of the thoracolumbar chain

from the eighth or ninth thoracic ganglion through the first or second lumbar ganglion, along the portions of the greater, lesser, and least splanchnic nerves.

In a series of 375⁷ thoracolumbar sympathectomies with follow-up of the patients for six months to five years, we had 38 fatalities either in the hospital or within six months following the operation. In an attempt to lower this mortality rate we analyzed the status of the 38 patients who died and that of the 337 surviving patients, and arrived at a set of rules which theoretically would reduce the mortality rate to 2.5 per cent. This figure would be reasonably low in view of the fact that each patient undergoes two major operative procedures and many are recognized as poor risks.

Following the lead of Keith, Wagener and Barker⁹ who graded the eyegrounds of hypertensive patients from 0 to 4 plus, we have utilized a similar method for grading the cerebral, cardiac and renal status of each patient. In order to do this satisfactorily we require, in addition to a careful history and physical examination, the following studies: Examination of the fundus, electrocardiography, a 6-foot heart film, a concentration test (pitressin or Mosenthal), urea clearance, blood urea nitrogen, non-protein nitrogen and creatinine determinations and urinalysis. Intravenous urography was applied routinely in the work-up of the first 150 patients until one death and two marked reactions associated with the injection of dye caused us to abandon it unless there was a significant indication for its use.

In Table 1 we have outlined a system of rules which serve to evaluate the degree of damage present in each of the four important organs, brain, eye, kidney, and heart, as a result of the hypertensive state. Any patient with ten or more pluses in all probability should not be operated upon.

A system such as this one, not based on mathematical data, must be interpreted in the light of clinical judgment, and it is implied that the operator has had a moderate amount of experience in the technique of thoracolumbar sympathectomy. The rules have aided us considerably and may be of help to internists and surgeons interested in the surgical treatment of hypertension.

It is very important to the surgeon and the internist to have clear-cut indications for accepting or rejecting these advanced cases for operation. It is our feeling that death occurring six months post-operatively indicates an unwise selection of patients for thoracolumbar sympathectomy. The only exception to this rule is the case in which papilledema has produced total blindness, and operation is per-

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TABLE 1.—*Rules for Evaluation of Symptoms in Indications for Operation*

Symbols Used	Eyes	Cerebrum	Heart	Kidneys
0	Normal	No signs or symptoms	No signs or symptoms	Normal
1 +	Arteriolar narrowing	Headaches and/or dizziness and nervousness	Slight symptoms and/or slight enlargement and slight e.k.g. changes	Nocturia; but concentration 1.024 or more; urea clearance 75% or more
2 +	Arteriolar narrowing and arteriovenous nicking	Headaches and/or nose-bleeds and/or occipital headaches and/or dizziness and nervousness	Moderate symptoms and/or moderate x-ray enlargement; moderate e.k.g. changes	Urea clearance 40-75%; concentration 1.015-1.023
3 +	Arteriolar narrowing and arteriovenous nicking and hemorrhages and exudates	Headaches and/or nose-bleeds and/or occipital headaches and/or dizziness and paresthesias	Marked symptoms and/or marked enlargement and marked e.k.g. changes	Urea clearance less than 40%; concentration less than 1.015; normal blood chemistry
4 +	Arteriolar narrowing and arteriovenous nicking and hemorrhages and exudates and papilledema	Stroke or encephalopathy or confusion	Coronary occlusion or congestive heart failure	Persistent elevation of n.p.n. to 40 mg. or more and b.u.n. to 20 mg. or more

formed to restore vision. Even when this objective is attained, it must be understood by the patient and his family that life expectancy will not be changed by this procedure.

INDICATIONS FOR OPERATION

Ocular Fundus: It may be stated categorically that in our experience no changes in the eye grounds per se, with the exception of marked arteriosclerosis in conjunction with evidence of marked arteriosclerosis elsewhere, are to be thought of as contraindicating operation. Failing vision is in most cases an urgent criterion for operation, often in the face of other findings which ordinarily might be considered as militating against surgical intervention.

Cerebral Vessels: The status of the cerebral vessels has been the cause of great concern. Clinically, attempts to predict occlusion or hemorrhage in the vessels of the brain are notoriously futile. However, in our experience, aside from a persistent hemiplegia of less than six months' duration the most dependable evidence of cerebral damage, and therefore a contraindication to operation, is mental confusion, however slight, as evidenced by the usual signs of organic brain defects, particularly recent loss of memory. Such defects were most frequently seen in the presence of other signs of generalized arteriosclerosis. Paresthesias, dizzy spells and headaches are noted in Table 1.

Cardiac Status: In considering the cardiac status of a candidate for sympathectomy, the most important consideration (granting a high degree of surgical competence and skillfully conducted anesthesia) is the history of functional cardiac capacity. Cardiac failure is not in itself a contraindication, but when it completely fails to respond to the usual therapeutic procedures it is an absolute contraindication. The electrocardiogram has been of value most frequently in verifying the diagnosis of recent myocardial infarctions. In such instances it has been our policy to defer operative intervention for eight weeks or longer depending on the severity and extent

of the infarction. Evidence of marked left ventricular enlargement has been seen frequently and, other factors being equal, is an indication for operation. Improvement in the electrocardiographic tracing may be expected in a high percentage of cases.

Renal Status: Renal decompensation as reflected in elevated circulating nitrogenous waste rules out the advisability of operation, whatever the underlying renal pathologic changes. In reviewing the operation and postoperative mortality data it is apparent that renal pathologic change as determined by elevated blood urea nitrogen above 18-20 mgm. per 100 cc. and nonprotein nitrogen above 40 mgm. per 100 cc. constitutes one of the most reliable preoperative guides from the point of view of both immediate and remote prognosis in hypertensive patients. Of the fatalities, half the hospital deaths, and almost half the postoperative deaths were among patients who had circulating nitrogenous wastes above those levels. This, of course, is a gross test of renal competence, yet for us it has been highly reliable, especially in the absence of other gross evidence of renal damage, such as marked albuminuria, hematuria, and anemia. Borderline levels must be considered in the light of other findings, and the closer the levels are to the upper limits of normal, the less confidence the surgeon has in making a decision. Poor renal concentration alone has not been considered a cause for withholding operation. Urea clearance determinations were done routinely, but their reliability was frequently questionable due to the difficulty of adhering rigidly to the technical requirements of the test. Additional and perhaps more refined tests of renal competence would undoubtedly have revealed evidence of renal damage in other patients with established hypertension, but for purpose of preoperative evaluation their inclusion would seem to offer little of critical value. Intravenous pyelography was rarely of any value and was soon discontinued, except when clinically indicated. In the preoperative evaluation of the status of an organ, problems such as the

following may arise: the renal concentration test may be only 1.013, whereas the urea clearance may be 85 per cent of normal. In that case we have one test placing the kidney in a 3 plus category and the other in a 1 plus. We therefore average the two and consider the degree of damage as 2 plus. Similarly a patient may have excellent cardiac function, that is, he may have no dyspnea, or angina after climbing three flights of steps, and yet the electrocardiograms and x-ray film of the chest may show moderate (2 plus) changes. It is a matter of judgment whether the patient should be classified as having 2 plus or 1 plus cardiac insufficiency.

A complete blood count, a sodium amyta test (9 grains divided into three hourly doses) and a basal metabolism test are desirable but are not emphasized in evaluating the patient's status for sympathectomy. A high basal metabolic rate associated with hypertension is suggestive of pheochromocytoma.

The response of the blood pressure to deep barbiturate sedation or the autonomic blockade, as by tetraethylammonium chloride, is a useful device for testing the capacity for relaxation of the arteriolar bed and theoretically anticipating the result. The sodium amyta test is a good indication of a probable postoperative blood pressure result but is not absolutely accurate as a prognosticator in any given case. In our series no patient was turned down solely on the basis of a poor response to sodium amyta.

The etamon test (tetraethylammonium chloride) has been studied by Poindexter and Tamagna and compared with the sodium amyta test in over 50 patients.¹² In approximately 75 per cent of the cases the two tests correlated exactly while in the remaining 25 per cent there was a variation in both directions. No postoperative evaluation of the usefulness of the etamon test has been made. In a group of 94 patients studied by Hinton and Lord⁸ an immediate postoperative drop in pressure was obtained in a high percentage of cases that was consistent with the drop obtained with sodium amyta. However, in a significant group no consistent correlation was noted. The effect of autonomic blockade with tetraethylammonium chloride closely parallels the results obtained with sodium amyta.

Smithwick¹⁴ has stated that patients with a hospital diastolic pressure of 140 mm. of mercury and

TABLE 2.—*Results in the Cases of 104* Patients Whose Postoperative Diastolic Pressure Exceeded 150 Mm. of Mercury*

Died: In hospital, 13 (12.5 per cent); of hypertensive vascular disease: in 3 to 11 months postoperatively, 8; within 18 months, 1.

Mean Postoperative Diastolic Pressures

	Follow-up	
	One Year	Two Years
Resting	123 mm. (39 patients)	129 mm. (17 patients)
Exercise	117 mm. (35 patients)	121 mm. (15 patients)

*Five patients were not followed.

TABLE 3.—*Results for 72* Hypertensive Patients, Aged 50-59 Years, Subjected to Sympathectomy*

Died: In hospital, 4 (5.5 per cent); died of hypertensive vascular disease: in 3 to 6 months, 2; in 7 to 12 months, 3; in 18 to 24 months, 2.

Summary of Diastolic Pressure of 58 Living Patients

Follow-up (months)	6	12	24	30	36	48
Patients	10	33	12	1	1	1
Resting, 110...	6(60%)	20(60%)	8(66%)	1	1	0
Exercise, 110...	9(90%)	20(60%)	7(58%)	1	0	0

*Three patients were not followed.

above do not respond satisfactorily to thoracolumbar sympathectomy. Among 24 males with a diastolic pressure of 140 mm. or higher he reports 20 deaths, three slightly improved, and one markedly improved. The results in our cases in this category are at variance with Smithwick's findings, as shown in Table 2.

De Takats and co-workers⁴ have emphasized the importance of operation in patients under 40 years of age having a diastolic pressure not exceeding 120 mm. of mercury. Our experience with the older group would seem worth recording and is presented in Table 3.

OPERATIVE PROCEDURE

We place our patients in the exact lateral position with the lower leg flexed and the upper leg extended. The kidney rest is elevated under the lower costal region. The tenth rib is resected subperiosteally in its entirety. The parietal pleura is then carefully reflected from the posterolateral chest wall exposing the diaphragm which is divided in its entirety on the operative side. Retraction of the parietal pleura subdiaphragmatically with contained lung and retroperitoneal fat is facilitated by two large Harrington splanchnic retractors. With the wide exposure, delineation of the greater, lesser and least splanchnic nerves along the lower thoracic and upper lumbar sympathetic chain is not difficult.

The greater splanchnic nerve is divided at its junction with the celiac ganglion. The chain is grasped with a long curved hemostat and carefully dissected from each intercostal artery and vein. The communicating rami are divided several millimeters from each ganglion and the chain is divided just below the third lumbar ganglion. The twelfth ganglion is usually located just above or in the substance of the diaphragm and we have repeatedly noted how attenuated the chain is between the twelfth thoracic and the first lumbar ganglion. The thoracic chain is pursued cephalad until the third ganglion is mobilized and division is carried out above it. In the majority of instances the greater splanchnic nerve has its origin from the thoracic ganglia, sixth, seventh, eighth and ninth. The lesser and least splanchnic nerves are removed as the thoracic chain is mobilized.

One of the interesting findings is the wide variation in the size and distribution of the nerves. The minimum operation in a series of 473 cases included

nine thoracic ganglia through the second lumbar ganglion with removal of the greater, lesser and least splanchnic nerves. This was done in about 35 per cent of the cases reported. The operative procedure is now much more extensive. In about 40 cases we have included the stellate ganglion through the third lumbar ganglion with all the splanchnic nerves. The minimal operative procedure as we do it now includes the third thoracic ganglion through the third lumbar ganglion with all the splanchnic nerves. It is obvious that the more radical the operation the higher the mortality, but also the better the end results.

PRECAUTIONARY MEASURES

As a result of our experience with 473 patients subjected to the two-stage thoracolumbar sympathectomy during the past six years, or from February 1942 to February 1948, certain principles of management during the operative and postoperative periods have evolved. The patients need every possible support to bring them through without a serious complication due either to their disease—for example, coronary occlusion, heart failure, cerebral accident or renal failure—or to a complication of thoracotomy such as pleural effusion, pneumothorax, atelectasis or pneumonia.

There are two basic problems to be handled during the operative and early postoperative periods: first, the maintenance of adequate blood pressure, thereby avoiding a sharp drop in systolic pressure to levels of 100 mm. of mercury or lower, which may occur with alarming suddenness, especially during and after the second stage procedure; and, secondly, the management of the thoracotomy during and after operation. The maintenance of a relatively stable systolic pressure has been best achieved by the use of 2 cc. of a 1 per cent solution of neosynephrine in 1,000 cc. of 5 per cent glucose in distilled water administered intravenously during the operation; and postoperatively, by using the same fluid with 1 cc. of neosynephrine per 1,000 cc. of solution until the systolic blood pressure has become stabilized at 90 or 100 mm. of mercury or higher. This may take only a few hours or it may take as long as 48 hours. Before this method was introduced, the anesthetist injected intramuscularly or intravenously 2 or 3 minims of neosynephrine when necessary and the same procedure was used postoperatively.

We have found that moderate anemia develops after each stage of the extensive sympathectomy, probably due to oozing into the extrapleural and intrapleural spaces during the early postoperative period. For this reason a 500 cc. blood transfusion is routinely given during the operative procedure and another 500 cc. transfusion immediately after the first stage and 1,000 cc. after the second stage.

The second major problem is to secure hemostasis and to deal with the open thorax during the operation and to prevent serious hemothorax, pneumothorax, atelectasis, and pneumonia postoperatively. Grimson⁵ has recently stated his position as follows:

A closed anesthetic system is employed, with an intratracheal tube used only occasionally. The pleural cavity is deliberately entered through a partial third rib resection and longer tenth rib resection and the chain removed from the stellate ganglion through L-1 and L-2 inclusive, followed by the use of a closed tube suction drainage of the pleural cavity for two or three days.

We also have made use of a closed anesthetic system, usually with an endotracheal tube. Recently we have begun a series without such a tube and the management in the hands of experienced anesthetists has been for the most part satisfactory. One point should be emphasized: this extensive sympathectomy should be carried out only when an anesthetist thoroughly familiar with open chest operative procedures is conducting the anesthesia. Although in our technique the parietal pleura is stripped from the chest wall from the diaphragm to the apex of the thorax, it is usually torn to a greater or lesser extent so that air readily passes into the intrapleural space. The anesthetic agents used have been ether, cyclopropane, and ethylene, and indications and contraindications for them may be found in reports by Phelps and Burdick¹¹ and Burdick, Phelps, and Peterson.²

Hemostasis is not a simple matter in this procedure, and one of the frequent complications has been development of fluid in the chest postoperatively. Grimson⁵ has had a similar difficulty by his method of approach. In addition to the clamp and ligature, there are at one's disposal temporary pressure on the venous bleeder against the vertebral column, which is often satisfactory; silver clips, oxycel and other hemostatic absorbable agents, bone wax, and finally electrocautery. We have not used the last mentioned because of the fear of an explosion in the presence of such potentially dangerous anesthetic agents and the open pleura. The most serious difficulty with hemorrhage is presented by an accidental tear of an intercostal artery high in the chest cavity such as the third, fourth, or fifth. When hemostasis has been secured following the removal of the sympathetic chain and suture of the diaphragm, the chest wall is closed around a large rubber catheter placed into the pleural space. Air is completely aspirated, the catheter removed and the skin closed without drainage.

During the entire postoperative period, but particularly during the first 48 hours, careful, repeated, bedside examination of the chest must be made. Signs of fluid and/or atelectasis (usually due to fluid) are promptly checked by a portable x-ray of the chest and aspiration with a large (number 15) needle carried out. In patients with poor cardiac reserve, pleural effusion (usually hemorrhagic) may be of the gravest significance and prompt recognition and treatment may be life-saving.

RESULTS

Although only one aspect of the disease complex is represented in blood pressure readings they are useful as measurable end points. This is especially

true of the diastolic pressure. Accordingly, we have summarized the results in 164 patients first by considering only the diastolic pressures, and by arbitrarily dividing our patients into two groups, those who had postoperative diastolic pressure below 110 mm. of mercury and those who had diastolic pressure above that level. From this point of view, those in the latter group were considered to have a less than satisfactory result. Of the 164 patients followed for one year 93 had diastolic pressure of 110 mm. or lower and 71 had diastolic pressure above 110 mm. A somewhat more dramatic response is demonstrated after exercise and is more steadily maintained for a longer period. We have been impressed by the number of patients whose postoperative diastolic blood pressure falls sharply after exercise, even when the resting pressure has been at higher levels. That this does not necessarily represent a good parallel with the effect to be expected from everyday stress and strain was apparent from the fact that frequently such sharp drops were seen in patients whose blood pressure, taken immediately after their walk or taxi ride to an appointment with the physician, was at higher levels. However, this paradoxical effect carries with it implications of benefit in those patients in whom vascular accidents might be anticipated if they were subjected to unaccustomed physical strain. The mechanism of such a drop in pressure may well be the result of peripheral dilatation in the muscle bed, unopposed as in the intact organism, by splanchnic constriction, thus averting the customary summated response of blood pressure elevation, as in the routine preoperative response to exercise. The distribution of diastolic pressure drops, which is indicated in Table 3, demonstrates the significant difference between the resting and exercise results six months following sympathectomy.

**RESULTS IN 104 PATIENTS WITH PREOPERATIVE
DIASTOLIC PRESSURES ABOVE 150 MM.
OF MERCURY**

A review of 104 patients whose preoperative diastolic pressures consistently ranged above 150 mm. of mercury is detailed in Table 2. In this group, as might be expected, the immediate hospital mortality is significantly increased. The total number of deaths in the follow-up period at hand is high, but the number of patients followed for more than six months is so small that further conclusions must be deferred. The range of diastolic pressure results is so broad as to preclude critical analysis from the point of view of preoperative prognosis.

That relatively advanced age is not necessarily a contraindication to thoracolumbar sympathectomy is readily appreciated in reviewing the data in Table 3 which represents the operative results in a group of 72 patients from 50 to 59 years of age. The hospital death rate was lower than that of the group as a whole, and the two-year follow-up reveals a large percentage of the patients continuing to maintain a satisfactory diastolic level. Although this group would ordinarily be expected to include a

higher percentage of patients with organic vascular changes, intensive clinical study was undertaken to eliminate those with such changes and undoubtedly the results in this group are highly colored by fortunate clinical preoperative evaluation.

TOXEMIA OF PREGNANCY

We do not have at hand data in a sufficiently adequate series to formulate an opinion on the relation of hypertension to the toxemia of pregnancy and the operative results. Of interest, however, are the cases of two young women in their early twenties. One, who had well documented hypertension of undetermined cause, following operation went through a full term of pregnancy with blood pressure entirely normal. The other developed hypertension during a previous pregnancy in the course of mild toxemia, her subsequent blood pressure being in the range of 130 mm. of mercury systolic and 140 mm. diastolic. One year following the day a second stage operation was completed she was delivered of a full term viable infant, having had normal blood pressure throughout her pregnancy. These are, of course, isolated observations, but are noted for their clinical interest.

SUBJECTIVE RESULTS

From the clinical point of view a most important consideration in the evaluation of any therapeutic procedure is the subjective result obtained. Our experience has paralleled that of others, in that we have consistently been impressed by the subjective improvement and the disappearance of severe and often disabling symptoms irrespective of the effect on the blood pressure. In obtaining these opinions from our patients, in all instances, a nurse-technician has asked them, among other questions, "Has the operation, in your opinion, benefited you?" Many factors enter into such a personal reaction. The patients may have had such a miserable postoperative course that the natural recovery from its severe discomfort leaves them certain that they are now better. Less easy to discount is the almost inevitable relief from pounding headaches and a sense of "relief from tension" not unlike that sensation so often described by patients who have undergone subtotal thyroidectomy for hypertension. Details

TABLE 4.—*Subjective and Objective End Results of Operation**

No. of Patients	Period (Mos.)	Follow-up	Subjective Improvement	Marked and Moderate Objective Improvement
215	6	163	76%	.....
148	12	123	83%	.....
76	18	62	81%	.....
62	24	50	80%	.....
152	6	.....	.....	123 81%
69	12	.....	.....	62 90%
31	18	.....	.....	28 90%
15	24	.....	.....	11 73%
8	36	.....	.....	8 100%

*This evaluation is based on postoperative blood pressure: Electrocardiographic readings, heart x-ray, blood chemistry, urinalysis, and symptomatic improvement.

of the subjective results among 215 patients are tabulated in Table 4 and compared with objective improvement in 152 patients of another group.

THE OVER-ALL PICTURE

As noted in reviewing the cases of patients in the older age group, the final selection of patients for operation is highly colored by what, for lack of a more suitable term, we call clinical judgment. Difficult though this is to define quantitatively, nevertheless the clinical impression of a patient to some extent equals the sum of the effects of the disease processes at work plus the evidence of the force of the patient's particular psychologic and physiologic factors working in opposition to the disease processes. It is a common clinical observation that there are times when the patient looks better than the chart would indicate he should, and vice versa. We feel that most clinicians will agree, especially in the face of equivocal or conflicting laboratory findings, that such an over-all evaluation of the patient must continue to play a significant part in the final decision for or against operation.

Whether complete or nearly complete sympathectomy is preferable to a less extensive operative procedure, has not as yet been determined. In the first two years, we followed the typical Smithwick procedure from T-9 through L-2, but after doing this in approximately 150 cases we gradually extended the procedure. For the past three years the minimal operative procedure has been from T-3 through D-3, and during this time we have also done about 40 total sympathectomies which included the stellate ganglion. The results of some cases (with a complete follow-up) in which the more radical operative procedure was carried out, as compared with results following the lesser procedure, are summarized in Tables 5, 6, and 7. There can be no conclusion that the more radical procedure is preferable until the patients have been observed for a longer follow-up period.

Moreover, as the mortality rate from the more extensive operation is double that from the lesser, this would have to be weighed against end results in forming an opinion as to the relative merits of the two.

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TABLE 5.—Number of Cases in Which the Postoperative Diastolic Blood Pressure Is Below 100 mm. of Mercury (One Year Follow-up)

Operation	Total	Number Below 100	Per Cent
T-8 or T-9 through L-2 or L-3....69	18	26	
T-3 or T-4 through L-2 or L-3....48	26	54	

Table 5 compares the effect of the Smithwick procedure and the extensive sympathectomy on the postoperative diastolic blood pressure. In each patient the resting and post-exercise diastolic blood pressure have been averaged. Only one-fourth of the patients following less extensive operation had diastolic blood pressure levels below 100 mm. of mercury. On the other hand, more than one-half of the patients had diastolic pressures below 100 mm. of mercury following the extensive operation. The vast majority of patients in both groups had preoperative diastolic pressures of 125 mm. of mercury or more.

TABLE 6.—Number of Cases Obtaining Smithwick Groups I and II Diastolic Blood Pressure Result (One Year Follow-up)

Operation	Total	Number of Groups	Per Cent
T-8 or T-9 through L-2 or L-3....69	33	48	
T-3 or T-4 through L-2 or L-3....48	36	75	

Table 6 shows the relative percentages of Group I and Group II Smithwick diastolic blood pressure results. A Group I result represents a fall of 30 points or more from the preoperative diastolic pressure and a Group II result represents a fall of 20 to 29 points. Again it is clear that the extensive operation is more effective in lowering the blood pressure.

TABLE 7.—In-Hospital Mortality Rate in 100 Consecutive Cases in Each Group

Operation	Cases	Deaths	Per Cent
T-8 or T-9 through L-2 or L-3....100	3	3	
T-3 or T-4 through L-2 or L-3....100	6	6	

Finally in Table 7 the number of deaths in the hospital in 100 consecutive cases in each group are compared. In both of these series the operations were done before the establishment of a set of rules which have proved helpful in the elimination of the majority of bad-risk patients. If the rules had been employed in the above two series the mortality rates would have been halved. We are fully aware that experienced and sound clinical judgment must go hand in hand with the practical application of the rules.

Otitis Externa

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SUMMARY

Otitis externa is a widespread condition which may occur in many different forms. Allergic reactions, bacteria, pathologic changes secondary to seborrheic dermatitis, and fungi, singly or in association with each other, are among the causative factors considered.

In the treatment of this condition, the diversity of causative factors which may be present must be recognized and evaluated; after one factor has been eliminated, another often remains to be conquered. The apparent confusion of reports regarding etiology and treatment is in fact due to confusion regarding the fundamental nature of the condition. Good results usually can be obtained by careful evaluation of the factors in each case and adaptation of treatment to the circumstances.

O^TTITIS externa is the common name given to inflammatory conditions of the external ear and external auditory canal. Incidence of the disease is high in otological practice. Dermatologists have contributed a great deal to knowledge of the condition, and in treatment of it the two specialties overlap. As there may be multiple etiological factors present, treatment should be directed to the eradication of the basic as well as secondary or superimposed infection.

In the adult, the external auditory canal averages 1 1/4 inches in length and is directed inward and forward. The inner one-third of this canal is supported by bone and the outer two-thirds by cartilage. The skin which lines the canal covers also the outer surface of the tympanic membrane. It is thick in the cartilaginous portion and contains hair follicles and sebaceous glands, the latter extending for some distance along the posterior and superior walls of the bony portion of the canal.

External otitis is often a painful condition. Authorities differ considerably on the subject of the nerve supply of the external ear. Eggston and Wolff⁴ state that the confusion is due to three factors: (1) the anatomic variation in different individuals, (2) the fact that data have been collected from clinical

observation of cases of herpes zoster, referred pain, and similar affections and not from anatomic dissection, and (3) the fact that the areas supplied by the various nerves overlap each other considerably. Sensory innervation is supplied by the auriculotemporal nerve of the mandibular branch of the trigeminal nerve, the auricular branch of the vagus nerve, and the great auricular nerve from the second and third cervical nerves.

The relative incidence of external otitis in men and women has not been determined. The recent war has given a distorted picture in this respect because of the large groups of men transplanted from their normal environment to hot, moist climates where external otitis is very common and often severe. No age group is exempt but the preponderance of cases is found among young adults.

ETIOLOGY

Many factors play a part in inflammatory reactions of the external ear. Allergic reactions, bacterial infection, pathologic changes secondary to seborrheic dermatitis, and fungous growths have been named as the usual causes. Other possible causes such as extremes of temperature, either heat or cold, radiant energy effects which may cause profound tissue changes, and chemical irritations not associated with hypersensitivity or allergy, will not be included in this discussion.

Allergic external otitis is due to exposure to an allergen to which the individual is hypersensitive. It may be acute or chronic. The acute stage is usually manifested by an exudative type of eczematoid dermatitis which may become chronic with thickening and desquamation of the skin. Cosmetics may produce these reactions; fingernail polish has been reported as a frequent offender, as have scalp lotions and perfumes. Sulfonamide and penicillin preparations, as well as many preparations used routinely in otologic practice, should always be regarded as possible causes of this condition.

External ear infections may be classified as pyogenic, non-pyogenic, and mycotic.⁵ Impetigo contagiosa not infrequently invades the external auditory canals of children and may be found in adults. The lesions are usually typical and have been attributed to the action of streptococci and staphylococci. A deeper invasion of the skin produces pyogenic dermatitis which may affect the underlying cartilage. These reactions are occasionally severe.

A circumscribed inflammatory reaction may develop with localized abscess. The lesions may be single or multiple and have a pronounced tendency to recur. Severe pain in such cases is due to localized

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swelling in tissues in which there is little room for expansion; well-developed furunculosis causes a great deal of distress. It is occasionally difficult to differentiate these reactions from those of acute otitis media. They may even be associated with disease of the middle ear as secondary skin lesions which develop as the result of contamination by infected secretions from the middle ear cavity.

Acute cellulitis of the external ear may follow any break in tissue which permits infection to gain entrance; a break in the skin of the ear canal caused by the common practice of scratching or by an unnoticed insect bite frequently provides a portal of entry.

Erysipeloid reactions and true erysipelas of this area may be encountered. These acute reactions are usually demarcated and present the usual picture of acute lymphangitis.

In inflammatory reactions of the external ear, in which bacterial invasion of the tissues has occurred, the factors are many and diverse. Williams, Montgomery, and Powell¹³ found by special culture methods that streptococci were frequently present in otitis externa and expressed the belief that these organisms were of etiologic significance. Beach and Hamilton¹ reported that in 65 of 69 cases observed on a South Pacific island the infection was due to *Pseudomonas aeruginosa*; of the remaining four "one showed a fungous growth and three a mixed type of infection composed of streptococci, staphylococci, and diphtheroids." Senturia and Broh-Kahn⁵ expressed the opinion that "the high degree of correlation between the presence of *Pseudomonas* organisms in the ear canal and the existence of certain types of external otitis suggests some relationship between these organisms and the disease." They further stated that this organism can almost always be isolated from the ear canals of patients with external otitis and not from the ears of normal individuals. *P. aeruginosa* is a particularly frequent water contaminant in the tropics; it is found also, although less often, in temperate climates.

Seborrhea is a frequent influencing factor in reactions in the external auditory canal. The dictionary defines seborrhea as a "chronic disease of the sebaceous glands marked by the occurrence of an excessive discharge of sebum from the glands." It does not occur until the age of puberty. According to Becker and Obermayer,² Unna believed moroccus was the causative agent in seborrhea, whereas Moore, Kyle, and Engman² have named *Pityrosporum ovale* as the infecting organism. The cause of seborrheic dermatitis is not known. Most investigators agree that because of constitutional peculiarities, the skin glands of some individuals provide a suitable medium for the growth of saprophytes or secondary invaders. Many of the cases of external otitis encountered in office practice in temperate climates are due to seborrheic dermatitis complicated by local cellulitis resulting from bacterial invasion of the tissue surrounding the sebaceous glands. This process may begin as an infection of non-resistant

sebaceous glands. The organisms involved in the secondary reaction are likely to be streptococci, staphylococci, and diphtheroids. Maceration of epithelium by water or perspiration is a common predisposing factor and in some of these cases the superficial epithelium harbors a parasitic growth of fungus.

Seborrheic dermatitis may be confused occasionally with psoriasis, one of the most common of all dermatoses. Psoriasis often affects the scalp and may extend down to the postauricular area. The differential diagnosis is made by the absence of similar lesions at sites of predilection of psoriasis, the nature of the lesion and of the scales, which in seborrheic dermatitis are thinner and less adherent than in psoriasis, and by the absence, upon removal of scale, of minute bleeding points which are present in psoriasis.

OTOMYCOSIS

Otitis externa in which the causative agents are thought to be molds is that type of inflammatory disease of the external ear referred to as otomycosis. Three types of molds may be encountered in such cases: (1) budding forms, (2) filamentous forms, and (3) higher bacterial forms. Higher bacterial forms of molds possess properties of both bacteria and molds. Classification of them is confused and there is a synonymy of names. "Bergey's classification (1934) contains 70 species under the genus *Actinomyces*."⁷ They will not be considered here except to state that the primary lesions of actinomycosis may occur on the external ear or in the external auditory canal and that these structures may be invaded by extension from a nearby focus.

Some otologists are convinced that the molds found in external canal lesions are definite pathogens and describe the condition as being caused by the molds found to be present. Whalen¹² stated that species of *Monilia*, *Aspergillus*, *Penicillium*, and *Achorion* have been found. Many believe that if molds are to be considered pathogenic it must be with the qualification that the site and conditions are predisposing factors. Forms of budding and filamentous fungi may be cultured from the surface of normal skin and the question arises whether they can be named as the cause of the disease under discussion. Positive demonstration of molds as the primary invaders in cases of otitis externa is extremely difficult. McBurney and Searcy⁹ stated that "the relationship of these [molds] as primary invaders has not been established since animal inoculations with the isolated fungi have almost invariably yielded negative results." Chisolm and Sutton³ thought that "in the ear the fungus is probably never a primary invader but it may persist after the primary condition has disappeared or become masked by it." Lewis and Hopper⁸ report that auto-inoculation experiments with *Aspergillus* were attempted on several occasions but were not successful. The presence of fungi in infected auditory canals can be demonstrated in fewer than a majority of cases. Simon¹¹ treated 90 male patients for external otitis

in a tropical climate. In only 21 per cent of these cases did cultures reveal the presence of a fungus. The author of this presentation studied material from infected auditory canals in 100 consecutive cases among naval personnel in the hot, moist climate of the Philippine Islands. By using the method of Whalen¹² of examining a smear treated with 2 per cent sodium sulfite with methylene blue added, molds were identified in only 19 cases. Culture and fermentation studies were not attempted. Although it is possible that in some of the cases fungi were the primary invaders and were later crowded out by bacteria, the fact that many of the patients in whom the fungi were not demonstrated were seen during the early and acute stages of the disease rather belies this possibility. It would appear that in most instances factors other than fungi were responsible for the condition, and that molds when present represented a parasitic growth. It is not to be doubted that actively growing fungus contributes to the infectious process and is responsible for some of the clinical manifestations. Under conditions favorable to such growth the vegetative portion of a fungus increases whereas under adverse conditions there is a tendency toward production of spore forms which are resistant to all forms of treatment. Invasion of the epithelium causes itching and discomfort. The resulting reactions may be mild or severe; exfoliation and denudation may be followed by ulceration and eczematoid dermatitis.

TREATMENT

Treatment of otitis externa must be directed toward the fundamental causative factor and must be carefully adapted to the severity of the dermatitis present. The treatment of external ear lesions caused by allergic reaction is primarily a problem of determining the irritant or allergen to which the patient is sensitive and eliminating this factor. Impetigo contagiosa is highly infectious and precautions must be taken against extension to other persons. Thorough cleansing with removal of crusts is essential; antibiotic preparations applied to a clean base are effective. Pyogenic dermatitis is treated as impetigo is treated, with thorough cleansing; the spreading cellulitis is treated as such with wet dressings; sulfonamides or penicillin may be helpful also. Furunculosis requires medication for relief of pain; if the infection is severe such relief will be inadequate at best. For the localized reaction and in the acute stage of diffuse swelling from cellulitis, loose packing and wet dressings with aluminum acetate have proven most satisfactory in the author's experience. Full strength or one-half strength Burow's solution may be used. Antibiotics often produce spectacular results if adequate blood levels are obtained and maintained. Surgical intervention is to be avoided if possible. Erysipelas responds to antibiotic therapy and to specific sera.

The large remaining groups of cases of external otitis present a complicated therapeutic problem. The number and variety of suggested remedies leads

to the suspicion that none is satisfactory. The suggested remedies are perhaps numerous because the causative factors are varied and the treatment must be selective to be effective. Seborrheic dermatitis, bacterial cellulitis, and fungous dermatitis may be present in varying degree. Although seborrheic dermatitis may be the fundamental factor in many cases, the other factors must also be evaluated. *Pseudomonas* organisms respond readily to substances containing the acetate radical. Acetic acid, 2 per cent, is helpful, as is cresatin (metacresyl acetate). Gill⁵ considers the latter preparation a potent fungicide, especially when reinforced by the addition of thymol. *Pseudomonas aeruginosa* is sensitive also to the action of streptomycin. Senturia and Broh-Kahn⁵ reported success with an ointment containing 5 mg. of streptomycin per gram of ointment base, in cases which showed a predominance of these organisms. Hayes and Hall⁶ consider a new compound, dibromsalicylaldehyde, to be especially effective against Gram-negative organisms including *Ps. aeruginosa* and also against fungi. Its use is recommended in solution or powdered form. Favorable response to the topical and systemic use of sulfonamide preparations is occasionally obtained. The topical application of penicillin preparations has been reported to be effective when Gram-positive organisms predominate. The author has not found this method of much value. The possibility of complicating the picture with allergic reaction to antibiotics, when these are used, must be borne in mind. Dyes have been used but rarely with success.

After the acute inflammatory reaction subsides the seborrheic dermatitis, if present, remains to be treated. Sulfur preparations have proven of value in these cases. Ichthylol has been used, and precipitated sulfur may be applied in an ointment. Ammoniated mercury and salicylic acid have been found efficacious. Some dermatologists stress the importance of a greaseless base in ointments for this use. The avoidance of moisture in the area is important and general hygienic measures should be instituted. Energetic treatment of the surrounding scalp is essential, as this area often acts as a focus of infection. Vitamin therapy cannot be expected to produce results unless a true deficiency exists.

Roentgen therapy is widely regarded as a valuable form of treatment for many dermatoses. The element of danger in its application limits its use to those who have had special training in it. Roentgen rays are not appreciably bactericidal but they are supposed to induce increased antibacterial activity of the tissues by disintegrating leukocytes and releasing antibacterial substances. Furunculosis, erysipelas and impetigo have been treated in this manner. Sebaceous glands are sensitive to roentgen rays and the margin of safety is wide in the treatment of hyperactivity of these glands. Excessive activity of the glands may be curbed by appropriate irradiation before surrounding cutaneous tissues are affected. Any beneficial result is probably due to control of the underlying seborrhea.

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Discussion by FREDERICK G. NOVY, JR., M.D., *Oakland*

Otitis externa is a vexing problem to both the otologist and the dermatologist. Dr. Rees has emphasized that the causes may be multiple and that many agents can produce dermatitis of the external auditory canal.

The term fungous infection of the ears is a misnomer. This has been brought out by Dr. Rees in his paper and has been confirmed by the investigations in the tropics during the war by Syverton, Hess, and Krafchuk (Arch. Otolaryng., 43:213, March 1946). These authors and others, such as Salvin and M. I. Lewis (External otitis with additional studies on the genus *Pseudomonas*, J. Bacteriol. 51:495-506, April, 1946), found in many cases of infection of the external auditory canal that the offending organism was usually *Pseudo-*

monas aeruginosa (*bacillus pyocyanus*). In both of these series of cases, when fungi were isolated from the external auditory canal, they were of the type which ordinarily are considered non-pathogenic. The high incidence of *pyocyanus* infection can well explain why ordinary methods of treatment with the usual antiseptic agents have not been satisfactory since *pyocyanus* is notoriously resistant to ordinary antiseptic solutions.

It is my feeling that the chronic recurring external otitis is nearly always on the basis of a seborrheic dermatitis involving the scalp, ears and occasionally other areas. At times superimposed upon this seborrheic dermatitis there is a secondary infection explaining the clinical exacerbation. For this reason the scalp should always be treated for the seborrheic dermatitis and after the acute exacerbation subsides the external auditory canal should also be treated on this basis. There are some investigators who feel that seborrheic dermatitis is due to a Vitamin B deficiency. Certainly it is true that in some of the chronic cases the patients apparently show improvement with large doses of Vitamin B and, in addition, injections of crude liver extract.

In regard to treatment in the past, weak solutions of acetic acid and liquor aluminum acetate (Burrow's solution) have been fairly satisfactory in the chronic cases. Recently there have been enthusiastic reports on the use of streptomycin by Calloway (*Pseudomonas aeruginosa* infection of the ear treated with streptomycin, Arch. Dermat. & Syph. 55:257, Feb., 1947). He used a solution containing 2,500 units per cc. as a wet dressing. Others have also reported favorably on this drug.

A word of warning should be raised concerning the use of streptomycin locally because there have been several reports of a severe localized dermatitis occurring in the nursing personnel making up solutions with this drug. Recently I had the opportunity of talking with the medical department of a large Veterans Hospital devoted to the care of tuberculous patients where investigative work with streptomycin was being done. Over half of the nurses handling this drug had severe dermatitis of the hands. I feel that this may be a consideration in the use of streptomycin locally in the treatment of various pyoderma of the skin.

Among the newer sulfa compounds that have been developed there is one known as sulfamylon which has proven *in vitro* to be highly effective against *bacillus pyocyanus*. This drug may be the answer in handling severe, chronic cases of otitis externa which are apparently due to this organism.

Because of the complexity of etiologic factors in otitis externa, Dr. Rees' admonition to appraise the factors in each case carefully and adapt the treatment to the situation should be heeded.



Observations on Difficulties Encountered in the Serological Diagnosis of Brucellosis and Q Fever

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WITH the introduction of the complement-fixation technique in the routine serological diagnosis of Q fever as originally developed by Bengtson (1941), difficulties have arisen regarding the interpretation of the results. The problem becomes particularly evident when the clinical and epidemiological history strongly incriminates exposure of the patients to meat and milk producing animals which may be infected not only with *Coxiella*, but likewise with *Brucella*.

In the course of serological studies on persons exposed by means of slaughterhouses or dairy products in California, it was observed that serological

reactions of several patients with symptoms and signs indicative of brucellosis, sometimes including strongly positive agglutination and complement-fixation reactions for *Brucella*, were also positive in the presence of *Coxiella* antigens. The records of a few such observations are summarized in Table 1.

In Case 1 (Table 1), the presence of *Brucella suis* infection was proved through cultures and the rise of antibodies for this organism. In addition, however, serum in the same case gave a positive complement-fixation reaction with Q fever antigen (Cox-Lederle antigen, American strain). Whether this reaction expresses the coexistence of Q fever and brucellosis or whether the low complement-fixation titer indicates a response to an antigenic fraction common to both *Brucella* and *Coxiella* can only be answered through antigen analysis of the *Coxiella*.

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TABLE 1.—Serologic Results Illustrating Diagnostic Difficulties.

Case Date	Brucella Diagnostic Tests	Q Fever	Diagnosis*	Exposure		
	Agglutination	Complement-Fixation	Complement-Fixation			
1. 3-18-48 4-2-48	1:1280++++ 1:5120++++	1:256++++ 1:2048++++	7.72	1:16++++ 1:8++++ 1:16+++ a.c. 1:8+	Brucellosis (<i>Br. suis</i> , blood culture)	Slaughterhouse, 6 months
2. 6-28-48 8-18-48	1:640++++ 1:2560++++	1:640++++ 1:64++++	0.36 8.44	0 1:16++++	Brucellosis	Butcher, slaughter- house, 9 months
3. 7-11-47 3-30-48 5-4-48	0 0 0	1:256++++ 1:4++++ 1:4++++	9.7 13.36	1:32++++ 1:64++++ 1:256++++	(Brucellosis) Q fever	Butcher, slaughter- house, over 2 yrs.
4. 9-9-48 9-16-48 10-13-48	0 0 0	1:64++++ 1:32++++ 1:16++++		1:64++++ 1:64++++ 1:64++++	Q fever	Raw milk mixer, milk plant, over 10 years
5. 11-26-47† 12-14-47 12-31-47 4-27-48 5-13-48	0 1:640++++ 1:640++++	1:256++++ 1:64++++		1:64++++ No serum 1:256++++ 1:256++++	(Brucellosis) Q fever	Slaughterhouse contact, 3 to 4 yrs.
6. 5-17-48 5-27-48 6-24-48	1:640++++ 1:40++++ 0	1:256++++ 1:256++++ 1:32++	2.0 7.24	1:256++++ 1:1024++++ 1:2048++++	Q fever	Slaughterhouse, 13 years
7. 5-5-48 5-28-48 6-4-48	1:640++++ 1:640++++ 0	1:256++++ No serum 0		1:16++++ 1:64++++ 1:256++++	(Brucellosis) (Virus pneumonia) Q fever	Raw milk
8. 6-15-48 6-24-48 7-12-48 10-21-48	1:1280++++ 1:64++++ 0 0	1:64++++ 0 0 0		1:256++++ 1:256++++ 1:256++++ 1:512++ 1:64++++	Q fever	Dairy cattle ranch, 27 yrs.

*If the diagnosis was changed, the first is given in parentheses.

†Serologic tests were not made in Hooper Foundation laboratories.

In the future in cases in which this question arises, it will of course be necessary to make every possible effort to demonstrate the presence of Coxiella.

In Case 3, in which the presence of chronic brucellosis was indicated by complement-fixation reactions with Brucella in 1947, the patient continued to have clinical relapses although there was no serological or other evidence to support the diagnosis of chronic brucellosis. When serum from this patient was finally tested following a pronounced relapse in 1948, a progressive rise in titer definitely indicated a Coxiella infection. Thus, the diagnosis was changed to Q fever. Again, an inoculation test for Coxiella would have been valuable.

A similar history concerning the patient in Case 5 emphasizes the necessity for testing the sera of slaughterhouse employees over a period of several months before a diagnosis is made. In this case a diagnosis of brucellosis was made, despite the fact that repeated blood cultures were negative and the agglutination and complement-fixation titer for Brucella gradually declined while, on the other hand, the titer for Coxiella rose. This reversal is an

example of an anamnesis reaction; that is, Brucella antibodies increase or reappear in the presence of the nonspecific antigen. The patient in this case had previously been infected with Brucella and the antibody-producing center was stimulated through the infection with Coxiella. The serological findings and histories in Cases 6, 7 and 8 furnish additional evidence in support of the interpretation offered for the findings in Case 5.

These observations are merely presented as additional evidence of the well-known fact that a diversity of antigens stimulate the appearance of Brucella antibodies. On the other hand, Brucella antigens may stimulate, in occupational groups exposed to livestock, the appearance of Q fever antibodies. There is no need to emphasize that in view of these findings the serological diagnosis of undulant or Q fever may be very difficult and that repeated blood cultures for Brucella and now inoculation of guinea pigs for the demonstration of the Coxiella are absolutely essential.

Detailed investigations are indeed indicated before far-reaching conclusions are drawn from epidemiological surveys based on serological tests.

The Prescription for Light Work for the Partially Disabled Employee

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SUMMARY

A prescription of "light work" for the industrially employed patient who is convalescent from injury or illness often is difficult to carry out and may do more harm than good to both employer and employee. Criteria developed from the observations of a physician engaged in an industrial establishment may be helpful to the physician in private practice who is called upon to decide when a patient may safely return to work and how strenuous or exacting the work may be.

MOST physicians in private practice have occasion at one time or another to present to an industrially employed patient who has been incapacitated by injury or illness a statement to take to his employer to the effect that "Employee is able to return to light work." Those physicians who have been engaged either full-time or part-time within an industry are likely to be familiar with the difficulties of compounding this prescription and with the various combinations of circumstances which make light work possible or desirable.

A review of the pertinent experiences of the physician in industrial practice may be helpful to the "outside" physician, for from them it is possible to develop criteria as a basis for judging the advisability of the "light work" prescription.

So far as the physician in private practice and his patient are concerned, the problem may appear quite simple. The patient is convalescent and willing, possibly even anxious, to work. But he describes his normal work, and it appears obvious that he is not improved to the point where he should attempt to return to it. It demands, in muscular activity, efforts which he cannot yet produce safely or efficiently. Yet, in the terms by which disabilities ordinarily are rated, he has only a small degree of limitation and if there is work which he can perform within his capacity, a simple statement to this effect seems quite appropriate and reasonable.

It is when we approach the job to which he is to be assigned that we find a number of variables. It may be well at this point to reexamine the accuracy of the belief that while the man is actually disabled

for his own particular job, he would not be disabled for another. Has it ever been recorded that the easiest work a man can do is his own job? His muscular and his mental patterns have been developed to fit that job, and even though it might appear to an observer to be more difficult than others, for the man accustomed to it, it is much easier than a new, even if lighter, job would be.

If it is established that the patient cannot do his own job, the possibility of making slight alterations in his regular work by relieving him of certain of the heaviest or most exacting motions in connection with it may be explored at first. Assume, however, for the purpose of this discussion, that the patient's own job, even if modified, still remains incompatible with either his comfort or his recuperative progress, and that he must be considered disabled for it.

The alternative most commonly resorted to is assignment of the employee to another existing job, in which the physical demands are compatible with the employee's limited capacity. If this job is productive, if it calls for an effort approximately equal to the effort called from this man on his own job, and if he can deliver approximately a day's production with a feeling of adequacy, the assignment is likely to prove satisfactory and the situation quite healthy. (Any difference in pay rate that may exist between the two jobs is a matter of plant policy and the situation is likely to be covered by a labor union contract.)

Another alternative is to assign the employee to a synthetic job, and such jobs are likely to vary greatly in their productivity. Occasionally a collection of odds and ends may be assigned to an individual so that he is usefully employed for his eight hours, but it is more than likely that he will be less usefully employed than on his normal job, and it frequently happens that his actual usefulness is close to nil. It is in this situation that the undesirable results of returning a convalescent to work are most clearly demonstrated.

Let us first consider an example in which the practice is completely satisfactory. John Doe, 32 years of age, a laborer employed seven years, an emotionally stable individual who is recognized as a good, steady employee, fractures a wrist in the course of his employment. It has been immobilized in plaster, and the prognosis is offered that he can return to his regular work, which is quite heavy, in a matter of eight weeks.

If John is kept out until he is well, he will lose considerable income, due to the difference between

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his compensation and his wages, and the employer is sympathetically inclined on this score. Perhaps, also, a safety campaign is about to start or is at its height, or has just been completed in the plant, and there is the record of lost man-days to consider. Fifty-six days on the accident record are worth saving, and so are the compensation costs which will not only be a current expense but also will be reflected in future insurance premiums due to the increased experience rate. There is some work which John could do which is not too exacting, and, what with one good arm and the other protected by a cast, and a certain amount of indulgence on the part of his supervisor and his fellow workers, he can put in the time on this work. On the face of it, everyone will gain: John will take home his full wages, will accomplish some work, compensation costs will be reduced, and the accident record will benefit. It may well be that these benefits will actually be realized and at the end of eight weeks John will be back at his old job. The plan may have been so successful that this practice will be adopted as future policy in similar cases.

Sooner or later, however, we will find the following pattern developing in the case of one of our John Does:

John Doe II will start out quite happily. His supervisor will be friendly and indulgent, and those around him will willingly help him. John II, whose education is minimal, has also been a very good worker when he was at his own job, and was apparently well adjusted to the routine heavy work. Now, for the first time, he is in a position where he cannot hold up his end and is actually encouraged not to try.

During the course of the next few weeks, he will accommodate himself to this comparative comfort, and about the time he is really settling down to enjoy it, he will sense a desire on the part of the supervisors and those about him that he begin again to hold up his end. The incentive to admit physical improvement will be lacking, because John II will be enjoying what Freud has described as the "advantages of an illness." John's physician will begin to sense an anxiety on his part over residual pain or other symptoms, which will not seem compatible with original expectations of his progress.

Of course, he will finally return to his old job, as there is a point beyond which he will not be able to extend his partial disability—but he will have developed feelings of hostility and resentment toward those who (he will feel) have crowded him back to work despite the residual pain; and he will, subconsciously at least, have learned a technique to escape from hard, routine or unpleasant work. If he has a potentially neurotic make-up, he will have a future punctuated by injuries or ailments which will make him an unhappy placement problem indefinitely.

Actually, no one will have gained in this situation—least of all John II himself. Had he been kept on the disability list and treated as one who had a temporarily total disability, he would have made a

complete recovery within the estimated period of time and would have had the incentive to return to work, as cured, as soon as possible.

In reality, the efforts to assist John II to escape the financial effects of a disabling injury have resulted in a new psychic injury to him. All that has been accomplished is the concealment of the actual cost of a compensable injury and its replacement with a buried production cost and a living personality problem. Yet many employers will fill a physician's prescription for light work, feeling that they are generous in so doing.

Possibly the case of John Doe II has been oversimplified, yet he or his counterpart has been seen in enough variations to warrant skepticism as to the advisability of prescribing special work for patients who are partially and temporarily disabled. As a general rule, unless a man can return to his own job, all the possibilities of the situation should be scrutinized very carefully before he is assigned to "easy work," or to what one worker colorfully described as a "fool-around job."

Somewhat the same principles apply to the early return to work when maximum improvement has not been achieved. There are disabilities of such nature—the marked disability caused by a foreign body in the cornea, for instance—that the length of disability can be accurately described in terms of minutes or hours. Few disabilities, however, can be so definitely estimated in terms of time. There is a twilight zone of convalescence in which it is impossible to state positively that the patient was disabled until exactly a certain date and was completely well from that date on. Therefore in the course of time the author has grown more and more willing to err on the side of prolonging disability time rather than shortening it.

This has been particularly true in cases of injury to the back. The single episode of the strained back is not the cause of the greatest anxiety or expense. It is the patients with recurrent and chronic back ailments who are the trial. In the author's experience increasing insistence that all residual pain must have disappeared before an employee is returned to heavy work has resulted in a considerable diminution of total lost time, rather than an increase, through a reduction in the number of recurrences.

PERMANENT PARTIAL DISABILITY

In the case of the permanent partial disability, of course, the situation is entirely different. Maximum improvement has been reached and the patient is still partially disabled. A return to work in this case, even though the work be entirely unproductive, may be a rehabilitation procedure of tremendous value. Lack of productivity over a period of time may be relatively insignificant compared with the value of rehabilitating the employee.

Similarly, in special cases, some degree of rehabilitation on the job is desirable, even though no permanent disability is expected. A patient who has been institutionalized for a long time as a result of a chronic disease, and who has been surrounded by

the ill, and who has been under a regimen of prescriptions, may be in great need of an on-the-job rehabilitation and an opportunity to spend a period of time adjusting to the return to the competitive life of healthy individuals. However, in most such cases it is probably better that a program of convalescence planned outside the plant be carried on until the patient steps over to work rather than returning in a state of asthenia and stepping up to it.

Employees with allergic reactions, particularly in the respiratory system or skin, to any agents with which they work or which surround them in their job pose a special problem. In such cases a change of work, not necessarily to easy work, but an entire change of working environment, is required. Not only may such a solution be difficult to work out, but in many cases it may not be lasting.

CRITERIA FOR RETURN TO LIGHT WORK

1. In considering an employee to be disabled for his own job, but able to do easier work, due allowance must be made for the fact that he is mentally and muscularly "in training" for his own job; and new work to which he is not accustomed, even though it is apparently lighter, may not actually be easier for him.

2. Temporary modifications of his own job to meet temporary disability should be considered before placing him on a new job.

3. New temporary jobs should, ideally, be fairly productive and call for sufficient effort to provide the employee with a sense of adequacy.

4. Synthetic jobs, if unproductive and calling for a minimum of effort, may retard the normal incentive for recovery and encourage a previously adequate individual to exploit the "advantage of an illness." The light work assignment should not be of such nature that the return to regular work will arouse hostility and resentment in the employee.

5. Return to either regular jobs or new lighter

jobs should be delayed, rather than hastened, if early return may invite recurrences. In cases of doubt, the doubt should be resolved in favor of late rather than early return.

6. Where rehabilitation is required, productivity may be an entirely secondary consideration, and a synthetic non-productive job considered as a useful therapeutic measure.

7. Convalescence off-the-job should be encouraged until return to work involves a minor increase of effort rather than a maximum physical strain.

RECOMMENDATIONS

Is there a practical use which physicians not fully familiar with work conditions in industry might make of these criteria? When a physician gives an employee a statement that he is ready for "light work," he does so in the expectation that it will be presented to someone in authority at the place of work. It would be more effective to give him a note saying, "Would like to discuss the possibility of light work for this patient. Would you be good enough to call me on the telephone?" This simple practice will result in a useful exchange of information between the physician and the plant nurse or some lay authority at the plant, with the result that in many cases the employee will be better protected. A decision whether to give him light work, an existing job or a synthetic one, return him to his old job, or have him stay on disability status until greater improvement occurs, is a very important one so far as the patient is concerned, and a decision made on lack of adequate information may be to his disadvantage. A description of his job or of the alternate jobs open to him, supplied by the employer, may alter the physician's recommendation. The information the physician may get about plant conditions and policies in a few minutes of conversation with the employer will be useful in future dealings with other patients employed at the same plant.



California Cancer Commission Studies*
Chapter XXVII

Cancer of the Cervix

HERBERT F. TRAUT, M.D., *San Francisco*

EVERY year in the United States approximately 17,000 women die of cancer of the cervix. In each case the disease went through an early stage when a cure could have been effected. It is estimated that approximately one out of every hundred women between the ages of 35 and 75 years has incipient or active carcinoma of the uterus.

Carcinoma of the cervix seems to have been co-existent with the human race, for the oldest medical writings refer to it in unmistakable terms. It is more common in married women and most common in those who have given birth to offspring; however, it is also seen in virgins and in nulligravida. There are racial proclivities, for the disease is seldom seen in women of Jewish ancestry, more commonly in Negroes, and is most common of all in Nordic and Oriental peoples.

ETIOLOGY

The cause of cervical cancer is unknown. Many theories have been advanced. The idea that misplaced groups of cells or embryonal rests are responsible was taught by Cohnheim. Chronic irritation, lacerations and erosions of the cervix have been thought to be underlying factors. Recently endocrine forces have been supposed to play a role, and still more recently viruses have been suspected and thought to be the only agent which could explain all the known facts.

The simple truth is that we do not know, and hence must treat the disease empirically until the causative factors can be revealed and a more logical mode of attack formulated than is possible at the present time.

PATHOLOGY

Cervical cancer is of three different cell types. The commonest type develops in the squamous epithelium of the portio of the cervix and usually at the junction of this epithelium with that of the mucous cells of the endocervical canal, from which point it rapidly spreads to other portions of the cervix. This type of cervical carcinoma characteristically is suggestive of the squamous epithelial cell. A less common form, of glandular nature, arises primarily in the mucosa of the endocervical canal or the glands which empty into it. It is therefore known as adenocarcinoma of the cervix, and the epithelium is suggestive of the epithelium which lines the cervical glands. A third type arises at the isthmus of the uterus, that is, at the juncture of the

cervix and fundus. This rare form is also glandular in pattern but also contains squamous cells and is therefore known as adenocanthoma. This is usually considered as a rare type of adenocarcinoma of the fundus, but undoubtedly it can arise from the region of the internal cervical os and for this reason mention of it seems desirable. The squamous type of cervical carcinoma and the glandular type of adenocarcinoma can be further classified, the classifications ranging from full differentiation of the mature cells to the less differentiated or immature or embryonic type of cell. With the squamous variety they are classified as follows:

Grade I—Representing full maturation with keratinization.

Grade II—Representing only a medium degree of differentiation.

Grade III—Representing embryonic or undifferentiated cells.

The glandular type or adenocarcinoma may be subdivided in a similar manner according to the microscopic appearance of the cells.

Grade I—Adenoma malignum—A well differentiated overgrowth of glands.

Grade II—Adenocarcinoma—Less well differentiated and with papillary tendencies.

Grade III—Adenocarcinoma—Slight gland pattern and cells tending to grow in sheet formation or in columns.

These microscopic gradings are of considerable importance in the treatment of patients. For instance, it is recognized that the Grade I type of squamous carcinoma grows rather slowly and may be less sensitive to radiation therapy as compared with a Grade III type of growth. Similarly the Grade I adenocarcinoma is much more benign and more slowly progressive than the less differentiated types.

Little need be said regarding the adenocanthomatous type because of its rarity. Fortunately for the patient harboring this type of growth, it extends slowly while still contained within the uterine musculature; however, once these barriers are traversed, this type of growth spreads widely and rapidly, metastasizing in all directions.

Of even greater importance when it comes to the evaluation of proper treatment and the probable prognosis in a given case is the extent to which the lesion has spread. The most widely accepted method of "staging" the extent of the growth is that adopted by the League of Nations in 1938. The stages are defined as follows:

*Organized by the Editorial Committee of the California Cancer Commission.

Stage I—The cancer is strictly confined to the cervix.

Stage II—The cancer has spread beyond the cervix and has infiltrated the parametrium on one or both sides but has not invaded the pelvic wall; or, it has begun to extend downward along the vaginal wall but it has not involved its lower third; or, it has spread to the body of the uterus.

Stage III—The cancer has extended beyond the cervix and has infiltrated the parametrium to one or both pelvic walls; or, it has involved the lower third of the vagina; or, isolated metastases are palpable on the pelvic wall irrespective of the extent of the primary cervical growth.

Stage IV—The cancer has involved the bladder as determined by cystoscopic examination or by the presence of a vesico-vaginal fistula; or, the cancer involves the rectum; or, the cancer has spread outside the true pelvis, i.e., below the vaginal inlet or above the pelvic brim.

CLINICAL CHARACTERISTICS

The symptomatology of carcinoma of the cervix in its early stages is by no means uniform. Not infrequently a suspicious looking area on the cervix which has been completely asymptomatic will prove to be carcinomatous when biopsied. More commonly a history of abnormal vaginal discharge or abnormal bleeding may be obtained. The discharge is apt to be watery in character rather than purulent. The abnormal bleeding may be nothing more than slight spotting after intercourse or a small amount of intermenstrual bleeding. If the woman is past the menopause, it may be represented by slight post-menopausal spotting. The amount of bleeding is usually very slight in the early stages. Unfortunately, pain is not an early symptom and it may be entirely absent until the late stages of the disease. Obviously the findings at the time of a careful pelvic examination are of the greatest importance. Such an examination includes not only a bimanual examination but visualization of the cervix, with a proper speculum and a good light.

The picture of advanced cancer of the cervix is only too familiar to all physicians. The everting or cauliflower growth which bleeds easily when touched, or the inverting type with ulcerative crater formation, either of which may be, and usually is, associated with extensive invasion of the cervix and often of the parametria, regional lymph nodes or those at a distance, have been seen so frequently as to need no elucidation as to diagnosis. The early lesions—those at a stage at which prognosis is best—are the most frequently overlooked. There may be nothing more than a relatively innocent appearing ulceration of one of the cervical lips, or there may be what appears to be a granular type of erosion present. A biopsy specimen must always be obtained from any suspicious area and it should be further emphasized that no treatment should be instituted until diagnosis of carcinoma has been established. Tuberculosis, syphilis, benign polypi

and ulcerated myomata may simulate the symptoms and appearance of carcinoma.

The obtaining of a suitable bit of tissue by biopsy is usually not difficult. A punch biopsy forceps may be used, or a small wedge of tissue may be excised with a knife. Obviously, if one is dealing with a small early lesion it is possible to completely miss the carcinomatous area unless care is used in choosing the biopsy site, and usually it is better to take two or three bits of tissue than to rely on a single specimen. This procedure can be done as an office procedure with surprisingly little discomfort to the patient. A minimal amount of bleeding may follow and this can usually be controlled readily with a tampon or the use of silver nitrate. Occasionally a physician will be reluctant to do a biopsy because of the possible danger of dissemination of the growth. It is generally appreciated, however, that this danger is practically non-existent and is more than compensated for by the fact that an exact diagnosis can be made and proper treatment instituted without delay. Above all, the cautery should not be used nor amputation done until cancer has been ruled out. This is particularly true of erosions which have persisted for some time even though treated by means which ordinarily produce healing. In these circumstances repeated biopsy may be necessary, and occasionally cancer will be found when a previous examination gave negative results. It may be that in time we shall have other modes of detection which will be of help in recognizing the early lesions of this type of cancer. Such a method is now under trial in a number of centers and consists in the examination of a stained spread of cells taken from the vaginal fornix. The method seems to be promising, but needs much further study as well as the establishment of facilities for the examination of the "vaginal smears" before it can be widely applied.

The earliest lesions of cervical cancer occur in the epithelial border of the organ and cannot be detected by the eye. Iodine solutions used as recommended by Schiller, applied to the cervix, were supposed not to stain cancer bearing areas with the same intensity as the normal glycogen-bearing cells. It was hoped, therefore, that the use of such a detector might aid in indicating the best site for biopsy. The method has been widely tried and has finally fallen into disuse because a number of other non-malignant processes such as erosion and keratosis which are much more common than cancer react in much the same way to the iodine solution. But perhaps most disappointing was the discovery that if estrin therapy was being used for treatment of the menopausal syndrome—and the menopause coincides with the period of highest incidence of cancer of the cervix—then even cancer cells may take on glycogen-bearing proclivities and thus be completely hidden from discovery by the Schiller method. It has seemed well, therefore, to place little or no reliance in the method.

One should remember that cancer of the cervix may occur within the canal and thus not be observed upon the portio. The passage of a small curette into

the cervix should be resorted to when bleeding or a brownish watery discharge persists after the vaginal surfaces of the cervix have been thoroughly tested and no lesion found.

Much of the same reasoning applies to cancer of the endometrium. Though endocervical and endometrial cancer are less frequently found than the squamous cancer of the portio, they are still sufficiently frequent to warrant a definite place in the process of diagnosis of uterine bleeding of unexplained origin.

It should be emphasized, therefore, that at present the most fruitful means for safeguarding women from the dangers of advanced cervical cancer consist of frequent examination of women over 35 years of age and the frequent use of the biopsy method of differentiating benign from malignant lesions.

TREATMENT

The medical profession has had long experience in the treatment of cancer of the cervix and has made great improvement, so that at present about 35 per cent of all patients with the disease may be afforded a "five-year cure." The results in so-called "early cases" may be much higher, or in the neighborhood of 55 or 60 per cent.

Much has been written about prophylaxis, but there is no positive way in which this can be done short of entire removal of the organ. Cleanliness, repair of the cervix after childbirth, and the treatment of erosions may be of some service in reducing the incidence, but this is not certain, for cancer may still make its appearance. Probably there will be no certain method of prophylaxis until the fundamental cause of the disease is known. Total hysterectomy cannot be the sole answer, for were it to be applied on a large scale, then almost certainly post-operative mortality and morbidity would exceed that due to the disease. For the present physicians must be content with the advantages afforded by early detection of cancer.

There are many methods of treatment and strong advocates for each. However, it is safe to say that, at present, operation should be the primary treatment only in the earliest cases. Small external lesions do not always mean that the lesion is any early one in the sense of the degree to which it may have invaded surrounding tissues or produced metastases. Hence, in some centers it has become customary to treat all lesions by radiation as a primary step. Some prefer to begin with radium intracervically and applied to the portio of the cervix in dosages aggregating from 4,000 to 6,000 milligram hours—this is particularly true of the smaller lesions. This to be followed by x-ray, because it has been shown by experience that only infrequently will lymphatic extensions be eradicated by radium alone. The x-ray treatments are usually given through four portals, two anterior and two posterior, directed toward the broad ligament areas. The total x-ray dosage should usually be in the neighborhood of 2,000 to 3,000 r as measured in air through each port. This com-

bined treatment seems to have given the best results obtainable by radiation therapy alone. When the lesion is large, it is frequently better to give the x-ray therapy first to heal and shrink the growth so that the radium then may be employed about four weeks later in a more effective manner.

In a few patients who respond to the foregoing treatment so that the local lesion is healed, who are in good health, and particularly who are not obese, and who in addition have easily accessible veins, the radical or the Wertheim operation for total hysterectomy, with removal of the broad ligaments and upper third of the vagina may be carried out. But this should be done only by surgeons who are expert in the technique, for it is not only a formidable procedure but the complications following operation may be many. In good hands, however, the "five-year cure" rate may be increased as much as 10 per cent and the "ten-year cure" rate from 12 to 15 per cent.

It is rare indeed that operation should be the only means of therapy. The use of the term "operable cases" is most misleading, as it has been used to classify Stage I and Stage II lesions, or, in other words, those *supposed* to be confined to the cervix. Experience has taught that frequently in Stage II cases, and occasionally Stage I as well, the growth may in fact have metastasized and so be beyond the reach of operation. This is the basis for the thought that it usually is better judgment to utilize radiation first and then evaluate the situation later as to the applicability of operation. Thus it may be seen that surgical treatment should be used cautiously, rarely as the primary step toward cure; more frequently it may be used secondary to radiation, and that when used the radical wide dissection of the parametria, lymph nodes and upper vagina as well as total hysterectomy is the procedure which should be employed. Simple total or panhysterectomy has no place in the treatment of cancer of the cervix.

If, as is hoped, the time may come when physicians have to deal with larger numbers of very small or intraepithelial lesions of squamous cancer of the cervix, much of the foregoing with regard to the treatment of the disease may require modification. At present no one has had sufficient experience with the really early lesions to warrant a statement. It is encouraging to note, however, that more and more of the early processes are being discovered, and certainly in time the medical profession will be in a position to evaluate what is essential in the way of therapy.

PROGNOSIS

The outlook for patients with cancer of the cervix depends upon several factors, such as the stage of the lesion, the type of growth, the adequacy of treatment and the constitutional factors pertaining to the patient which aid or detract from the treatment. The following summary will give an indication of what can be expected with good management under usual patient circumstances.

"Five-Year Cures"

Stage I.....	72%
Stage II.....	55%
Stage III.....	34%
Stage IV.....	3%

The absolute cures are, of course, much fewer in number; however, relative comfort for a five-year period as a result of therapy is a worthy aim for the profession. As absolute cures are obtained almost exclusively in Stages I and II, the importance of early diagnosis is clear. It may not be repetitious to emphasize here that yearly examination of the cervix by a competent physician will almost surely place any patient so observed within this category, if not an even more favorable one.

The ordinary causes of death from cancer of the cervix are uremia due to ureteral involvement, hemorrhage, sepsis and distant metastases.

Because of the frequency of ureteral involvement, careful appraisal of the urinary tract is prerequisite to radiation therapy, and frequently when the ureter is involved proper urological treatment can do much to prevent or allay pyeloureteritis and the dangers of uremia.

THE DUTY OF THE PHYSICIAN

The high incidence of carcinoma of the cervix makes it the most important malignant process occurring in women. The only other lesion which approaches it in frequency is cancer of the breast. Because the breast is palpable and can easily be seen by women, much progress has been made toward early recognition of cancer in the breast through education of the public concerning the early signs and symptoms. Unfortunately for the early detection of cancer of the cervix, the uterus is hidden within the woman's body, where it cannot be easily subjected to the same scrutiny by the woman herself, and hence she must—or should—depend upon her physician to make the examination. But how many women—or how many physicians, for that matter—are accustomed to demand the yearly physical examination? Relatively few, for the finding of early cancers of the cervix has not kept pace with the finding of early cancer of the breast. Thus it may be said that for the most part the chief improvements the medical profession has made in dealing with this disease, have been those pertaining to the techniques for treating well established and advanced lesions. To tell women to seek the physician's help when she experiences abnormal bleeding is but to beg the question, for bleeding is caused by ulceration and erosion of blood vessels, and this does not occur, as a rule, until invasion of the growth is well

established. At present the annual or semi-annual examination by a careful physician is the only means by which the early, easily curable stage of this disease may be discovered.

Responsibility for this annual examination should rest with the physician. He should keep a card index of all women patients under his care and have his secretary or office nurse—or, lacking them, then his wife—notify each one yearly that she is due for examination. Such an examination should cover all physical matters needing follow-up, but cancer in all its forms should be uppermost in mind, and above all, adequate examination of the cervix and breasts should not be neglected in women patients.

SUMMARY

Approximately 17,000 women die every year of cancer of the cervix.

The cause of cancer of the cervix is unknown.

Squamous cell carcinoma arising in the portio of the cervix is the most common type.

Accurate "staging" of a cancer of the cervix is of the greatest importance in planning treatment and giving the probable prognosis.

Intermenstrual bleeding or postmenopausal spotting, however slight, should always arouse suspicion of cancer of the cervix or uterus.

A pelvic examination should include not only a bimanual examination but also visualization of the cervix with a proper speculum and a good light.

All suspicious lesions should be biopsied. The cautery should not be used nor amputation done until cancer has been ruled out.

There are many methods for treating cancer of the cervix. Each case must be considered as an individual problem. The method of treatment is planned after considering the microscopic grade and the stage and extent of the growth. Operation should be the primary treatment only in the earliest cases. The combined treatment (radium intracervically to 4,000 to 6,000 milligram hours followed by x-ray, 2,000 to 3,000 r through four ports) seems to give the best results from radiation therapy alone.

At present the most fruitful means for safeguarding women from the dangers of advanced cervical cancer consists of frequent examination of women over 35 years of age and the frequent use of the biopsy method of differentiating benign from malignant lesions.

"Tumors of the Brain and Spinal Cord" by H. C. Naffziger, M.D., and "Bone Tumors" by Don King, M.D., Chapters XXIX and XXX of the California Cancer Commission Studies, will appear in this section of the May issue of CALIFORNIA MEDICINE.

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EDITORIALS

Medical Rackets

Within the last year a new racket has sprung up in California, a promotional type of business which masks itself under some fancy title like "Universal Cooperative Health and Medical Association." The words "medical association" usually appear as a part of the title, for reasons which soon become obvious. These organizations operate at minimum expense from dingy offices, send out poorly mimeographed papers of agreement (contracts, if you please) to physicians, and probably salesmen to the gullible public. There is reason to believe that they make only a moderate impression on the public but the very existence of several such organizations indicates that at least some people fall for this kind of guff.

If anyone is interested in embarking upon this form of enterprise, the rules are simple. All you need do is coin a name, preferably with the words "medical association" in the title and, if possible, working in the word "American" so that a title of "American . . . Medical . . . Association" might be used to impress the unwary. Next, print up a schedule of fees for a variety of medical and surgical procedures, making the fees 30 per cent or more below the fees that people would normally expect to pay for such services from private physicians. Then mimeograph a rather shoddy letter to advertise yourself as "operating without profit" (not a corporation organized under the non-profit laws of California) which you send out to all the physicians in the state, asking them to agree to provide services at 30 per cent less than their usual fees to members of the "medical association."

Armed with these few items, hire a few salesmen on commission to go out among the working people and sell them on the idea that by paying a fee to your "medical association" the customer will be entitled to secure all of these wonderful services at

cut rates from all the physicians in the state. Of course, if the physician the patient wants hasn't agreed to perform these services at these fees, the patient may call up the company and secure the name of one who will go along at the fees printed on the schedule.

Please note that nowhere along the line do you, as proprietor of the scheme, guarantee anything. Nowhere do you assure the physician that he will receive the fees on the cut-rate schedule. Nowhere do you make any guarantee to the patient that he can secure these services for these fees. All you do is to take the customer's money and tell him that since he is a member of your "medical association" he can secure these services from a physician at these fees. The poor customer is on his own in dealing with the physician he selects; the "medical association" has done nothing more than accept his dues or fees in exchange for a so-called privilege of dubious merit.

This type of enterprise is in our midst today. The operators have not bothered to incorporate, to secure licenses to sell insurance or to establish any financial or moral safeguards to protect the public or the medical profession. Apparently the only protection offered is to the pocketbook of the proprietor himself, and even that depends upon his success in enrolling new subscribers.

To the physicians who have been besieged by appeals to "join" such associations as participating physicians, it should be immediately apparent that the blandishments in the letters of solicitation are meaningless. It should also be pointed out that any physician who permits his name to be used and published by one of these organizations, or who even joins and thereby allows his name to be entered on a panel, is violating the capping and steering provisions of the Medical Practice Act. Further, the

physician who joins is contributing his services at reduced fees and is actually rendering services for the direct profit of laymen, in violation of the Principles of Medical Ethics.

Senate Bill 970, now before the California Legislature, would control this type of business by placing it under the jurisdiction of the State Insurance Commissioner, who would by law invoke the usual requirements for operating an insurance business in the state. The California Medical Association will support this type of legislation. This racket must be stamped out before it causes direct harm to the public and indirect harm to the public and medicine alike in undermining public confidence in legitimate sickness cost insurance programs. Voluntary health insurance is a boon to the people of the state, and the fringe operations of greedy racketeers with snide schemes must not be permitted to reflect upon its good record.

Insurance—Good or Bad

The State Insurance Commissioner has written the California Medical Association regarding the continuing circularization of doctors by out-of-state insurance carriers who offer what appear to be bargains in accident and health insurance policies. He points out that these companies cross over state lines by using the mails and do not bother to take out licenses to sell their services in California. He also shows that in many cases the coverage offered by these companies is second grade or worse, often to the point of constituting a fraud and misrepresentation to the policyholder.

The Commissioner's point is well taken and gives cause to reiterate the old warning about reading the fine print as well as the large. In the words of one of our own members, "The large print giveth; the small print taketh away."

Toward Better Service for Hospitalized Patients

In order that the benefits of scientific medicine may reach the public, it is essential that conditions be such that the public have reasonable access to well trained physicians. It has been estimated that approximately 30 per cent of patients require hospitalization from time to time. When hospitalized they frequently need the services of such specialists as pathologists or radiologists. It is desirable that these specialists be readily available in hospitals. In order to avoid the possibility of inferior service to patients in this regard it is desirable that the conditions under which these specialists are appointed to hospital staffs be those which attract the competent.

It is therefore with pleasure that we note a forward step in the development of sound relationships between physicians and hospitals recently outlined by legal counsel for the California Medical Association and representatives of radiologists in this state. These groups, working at the direction of their respective bodies, have evolved a model contract for the appointment of radiologists in hospitals under ethical conditions. The outline is intentionally a broad one, inasmuch as conditions vary greatly from one district to another, and from hospital to hospital.

In general, the contract is one under which the physician practices his specialty as an "independent contractor" in the institution, and the hospital recovers all costs plus a reasonable return on its

investment in space and equipment (or in space, when space alone is furnished). It is estimated by various investigators that the cost of conducting a modern radiological department in a private hospital of average size is between 33 and 45 per cent of the gross income of the department; to this figure may be added a reasonable percentage as a special return on investment (for example, 3 to 5 per cent). These sums should be paid to the hospital each month by the specialist or specialists conducting the department. An efficient method for the average private hospital is one under which the apparatus is furnished and maintained by the specialists involved.*

It is highly desirable that senior or experienced specialists be attracted to staff positions, so that the benefit of their knowledge may be available in the complex cases of all types and in all specialties which tend to gravitate to hospitals. Many administrators are conscious of the desirability of securing mature and able men for these posts, and no longer tend to seek the "just-graduated" for positions as departmental heads. If the physician is offered an ethical type of appointment and one under which there can be no question of dividing professional fees, then not only the institution but, much more important, the hospitalized sick will benefit. The new contract is to be commended.

*Report of C.M.A. Committee, Calif. & West. Med., 46:419, June, 1937.

CALIFORNIA MEDICAL ASSOCIATION

E. VINCENT ASKEY, M.D.	President	Council Chairman
R. STANLEY KNEESHAW	President-Elect	Secretary-Treasurer
LEWIS A. ALESEN, M.D.	Speaker	Chairman, Executive Committee
DONALD A. CHARNOCK, M.D.	Vice-Speaker	Editor
JOHN HUNTON, Executive Secretary	General Office, 450 Sutter Street, San Francisco 8	
ED CLANCY, Field Secretary	Southern California Office, 417 South Hill Street, Los Angeles 13	

NOTICES AND REPORTS

Executive Committee Minutes

Tentative Draft: Minutes of the 213th Meeting of the Executive Committee, San Francisco, January 23, 1949.

The meeting was called to order by Chairman Shipman in the Association office at 10:30 a.m., Sunday, January 23, 1949.

Roll Call:

Present were Drs. Shipman, Alesen, Bruck and Kneeshaw, Secretary Garland, Editor Wilbur, Dr. D. H. Murray, Chairman of the Committee on Public Policy and Legislation, and Executive Secretary Hunton. A quorum present and acting. Absent: President Askey, attending a meeting as guest speaker.

1. Secretarial Conference:

It was regularly moved, seconded and voted to hold the annual conference of secretaries of county medical societies in San Francisco on Saturday, March 5, 1949, to be followed by a meeting of the Council on March 6, 1949. It was suggested that the secretarial conference be held in the San Francisco County Medical Society building if this is available.

2. San Diego County Medical Society:

(a) A communication was received from the San Diego County Medical Society, offering a suggested plan for inclusion in the A.M.A. public relations program and it was moved, seconded and voted to refer this suggestion to public relations counsel of the A.M.A.

(b) A request from the San Diego County Medical Society that the Association provide the Society with local public relations counsel was discussed and it was moved, seconded and voted that the Association offer to send official representatives to meet with the officers of the county society to discuss the local public relations problem.

3. Public Policy and Legislation:

(a) A resolution adopted by the Legislature of the State of Nebraska, memorializing the federal Congress to refrain from adopting compulsory

health insurance legislation was read and discussed. It was moved, seconded and voted to refer this item to the Committee on Public Policy and Legislation and to write to the Nebraska Legislature the congratulations of the Association for this forward-looking action.

(b) Senate Bill 157, the Governor's health insurance bill, was discussed and it was suggested that amendments might be offered to provide a tax-supported system of furnishing all eligible citizens with legal service, food, clothing and other necessities of life, including morticians' services. The executive secretary was instructed to make inquiries into the total number of California residents now covered by some form of voluntary health insurance.

(c) An amendment to the Biologics Act, to include under the technical supervision and licensing of the State Department of Health those blood banks which do not make a charge for blood or its derivatives, was discussed and it was regularly moved, seconded and voted to approve this amendment and to sponsor it in the Legislature.

(d) It was regularly moved, seconded and voted that the Association again sponsor a proposed amendment to the Hospital District Act to provide safeguards against possible substandard staff membership conditions in hospitals constructed under the terms of the act.

4. Public Relations:

(a) An appeal for funds from the American Free Enterprise Association, Inc., was discussed and it was moved, seconded and voted that it be referred to public relations counsel for the A.M.A.

(b) Dr. Kneeshaw called attention to an item published by a syndicated newspaper columnist in which compulsory health insurance was decried and it was regularly moved, seconded and voted that this be forwarded to public relations counsel for the A.M.A.

5. Cancer Commission:

A request from Dr. Lyell C. Kinney for advice on the production of two additional films on examinations for cancer was discussed and it was regularly

moved, seconded and voted that such films be produced at the expense of the Cancer Commission, possibly with financial assistance from the American Cancer Society, California Division.

6. *Extraprofessional Health Organizations:*

It was regularly moved, seconded and voted that Dr. L. H. Garland be named a member and vice-chairman of the Council's committee to evaluate health organizations outside strict professional ranks and that Dr. John W. Cline, chairman (Drs. L. A. Alesen, E. V. Askey, H. G. MacLean and D. H. Wilbur, members) be urged to continue his leadership of this committee with the assistance of the vice-chairman.

7. *Southern Pacific Medical Department:*

A letter was read from a physician whose services had been sought by the Southern Pacific Railroad's medical department and it was moved, seconded and voted that the Secretary look into the statements contained therein and report to the next Council meeting.

8. *Industrial Accident Commission:*

A request from insurance interests for establishment of a joint insurance-medical committee to consider downward revision of the proposed schedule of fees for compensation services was discussed and it was regularly moved, seconded and voted that this request be referred to the Council. It was also voted to notify all members of the possibility of solicitation of services at reduced fees.

9. *State Department of Education:*

Dr. Kneeshaw called attention to a series of conferences scheduled by the State Department of Education on subjects involving life in rural areas and it was regularly moved, seconded and voted that Dr. Kneeshaw or a representative to be named by him attend such conferences as an observer and participant in discussions.

Adjournment.

SIDNEY J. SHIPMAN, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

Suggested Model Contract for Hospital Radiologists

The following suggested model agreement is printed for the information of radiologists and other physicians desirous of completing contracts with private hospitals. This contract was prepared by and as a result of joint conferences between legal counsel for the California Medical Association and counsel for the Association of California Hospitals. It has been approved by the Council of the California Medical Association and is now under study, awaiting final action by a special committee of the hospital group.

The Council believes it is of sufficient interest and importance to the members of the California Medical Association to warrant publishing it in complete form.

MODEL RADIOLOGY AGREEMENT

THIS AGREEMENT made and executed in duplicate at _____, California, as of _____, 19____, by and between _____ HOSPITAL, a corporation, hereinafter designated as "Hospital," and _____ M.D., hereinafter designated as "Radiologist."

COMMENT

(In the event the hospital is a trust or an individual proprietorship, the above provision should be modified to indicate this.)

WITNESSETH:

WHEREAS, The Hospital is the owner and operator of a hospital at _____, California, in which there is located a Diagnostic and Therapeutic Radiological Unit, and

WHEREAS, The Radiologist is a duly qualified and certified specialist, and

WHEREAS, The parties hereto are desirous of entering into this agreement in order to provide a full statement of their respective covenants and agreements in connection with the operation of said Diagnostic and Therapeutic X-ray Unit in said Hospital during the term hereof;

Now, THEREFORE, For and in consideration of the premises and of the mutual covenants and agreements herein contained, it is understood and agreed by and between the parties hereto as follows:

First: The Hospital shall make available for the use of the Radiologist during the term hereof the space now occupied by its Diagnostic and Therapeutic Unit, and in addition thereto the Hospital shall supply and furnish, at its own cost and expense, for the use of the Radiologist such equipment as may be necessary for the proper operation and conduct of the said Unit. The Hospital shall also, at its own cost and expense, keep and maintain said equipment in good order and repair and upon said equipment or any part thereof becoming worn out or obsolete the Hospital shall replace the same with other equipment of similar character and utility. The Hospital shall also, at its own expense, furnish the Radiologist with ordinary janitor and in-house messenger service, laundry and such electricity for light and power, gas, water and heat as may be required by him for the proper operation and conduct of said X-ray Department. The Radiologist shall be a member of the active staff of the hospital and shall serve as chief of its department of radiology.

COMMENT

In the event the Radiologist owns and furnishes his own equipment, the above paragraph is not applicable, and

language should be inserted to indicate that he is furnishing his own equipment and is responsible for repairs and replacement thereof. It also should be provided that in such event, he is responsible for the payment of all property taxes assessed against the property owned by him and space occupied by the X-ray Department. Such a paragraph could be written as follows:

ALTERNATIVE FIRST

"The Hospital shall make available for the use of the Radiologist during the term hereof the space now occupied by its Diagnostic and Therapeutic Unit. The Radiologist shall supply and furnish, at his own cost and expense, such equipment as may be necessary for the proper operation and conduct of said Unit. The Radiologist shall, at his own cost and expense, keep and maintain said equipment in good order and repair, and in the event said equipment or any part thereof shall become worn out or obsolete, the Radiologist shall replace the same with other equipment of similar character and utility. The Hospital shall, at its own expense, furnish the Radiologist with ordinary janitor and in-house messenger service, laundry, and such electricity for light and power, gas, water and heat as may be required for the proper operation and conduct of said X-ray Department. The Radiologist shall be responsible for and shall promptly pay all property taxes levied against the equipment owned by him and against the space occupied by his department."

Second: The Radiologist shall furnish at his own expense all necessary supplies such as films, chemicals, stationery and similar items. All non-medical personnel required for the proper operation of the X-ray Department shall be employed by the Hospital—the selection and salaries paid such personnel to be subject to the joint approval of the Radiologist and the Hospital, provided that salaries of personnel classifications that are used in other departments of the Hospital shall be uniform, insofar as may be consistent with the recognized hazards of the work.

COMMENT

Some hospitals and doctors may prefer to work out an arrangement under which the employees in the Radiological Department are to be employed directly by the Radiologist. It is the belief of the attorneys for the Association of California Hospitals that such arrangement may jeopardize the welfare exemption if the Hospital is enjoying such exemption. This is on the theory that the law requires that the Hospital own and operate the exempt property, and they feel that if the employees are not the employees of the Hospital, the Hospital cannot claim that it is operating the department. If, however, it is the desire to have such arrangement, it is suggested that the following paragraph be used:

ALTERNATIVE SECOND

"The Radiologist shall furnish at his own expense all necessary supplies such as films, chemicals, stationery and similar items and expendable equipment. He shall choose (with the approval of the Hospital administration), employ and be responsible for all personnel that may be required for the proper conduct of the said department, including technicians, secretaries, and other necessary personnel."

Third: The Radiologist shall operate and conduct the X-ray Department at the Hospital, act as its director, and devote his best ability to the proper

management thereof, using the premises solely for the practice of Radiology, and on an equitable and professional basis.

Fourth: The Radiologist shall perform, without compensation, such teaching and other duties as are in accord with the recommendations of the A.C.S. and the A.M.A. for accrediting hospitals of this type.

COMMENT

In the above paragraph, if the hospital is a teaching hospital or the Radiologist is to be compensated for his instructional work, the words "without compensation" should be eliminated from the above paragraph.

Fifth: The Radiologist and employees under his control shall comply with the policies, rules and regulations of the Hospital subject to the State and federal statutes covering his practice.

Sixth: The Radiologist shall perform without charge all radiological services (other than those for which a charge is collectible from sources other than the Hospital and its employees) required by the Hospital in caring for its employees who may be injured while on duty, and required by interns, residents, student nurses or other students in any department of the Hospital.

Seventh: The Radiologist's professional fees are in general accordance with customary local fees for comparable services and he shall submit herewith a schedule thereof to the Hospital authorities for their information, likewise any proposed changes in said schedule shall be submitted to the Hospital in advance. In the event there is any disagreement as to the fee schedule, such disagreement shall be referred to the executive committee of the medical staff of the Hospital for determination, and if said executive committee does not have a radiologist and pathologist upon it, then the Radiologist shall have the right to appoint a radiologist of his choosing to act as a member of said committee solely for the purposes of this paragraph. The determination of the said executive committee shall be binding upon both parties. If there shall arise any question concerning the character of services furnished in the X-ray Department, the Radiologist or the Hospital shall have the right to submit such matter for determination to said executive committee and its decision in that regard shall be final.

COMMENT

The above provision has been drafted to avoid any contention that there has been a setting of professional fees by a lay person. It is believed that the arbitration provisions of this paragraph will be rarely used since the initial fee schedule is established upon the effective date of the agreement, and it is expected that any changes can be worked out by the administrator of the Hospital and the Radiologist without difficulty. It should be borne in mind that in large hospitals two or more senior qualified radiologists are necessary for the proper care of patients.

Eighth: The Radiologist shall file daily with the business office of the Hospital a memorandum of all x-ray services rendered, and the Hospital shall collect as his agent such bills so rendered, at the

same time as hospital bills owing by said patients are collected. In the case of out-patients, the Radiologist shall issue his own bills, except to clinic and nonpay cases.

COMMENT

It is to be noted that in the above paragraph it is provided that the Radiologist shall do his own billing for out-patient work. However, it is suggested that it may be better for both parties if this sentence is eliminated and the Hospital do all billing. In billing for radiological services, the Hospital need not send out separate bills as one of the purposes of this arrangement is to avoid multiple billing. The hospital must indicate on its statements that it is the "billing agent for Doctor _____, Radiologist," some place on the billhead.

Ninth: On or before the _____ day of each month, the Hospital shall present to the Radiologist a statement and accounting of all his fees for radiological services rendered to in-patients and outpatients for the preceding month together with a check for his fees to be fixed as follows:

From the total of all billing from said preceding calendar month covering radiological services as heretofore provided, the Hospital shall deduct _____ per cent from the billings for in-patients' work and _____ per cent for out-patients' work as an allowance for bad debts, and _____ per cent of the remaining amount shall be the Radiologist's net fees which shall be paid over to the Radiologist with said statement. The remainder thereof shall be retained by the Hospital as compensation to it for the facilities and services furnished by it under the terms of this agreement. The above percentages for bad debts shall be adjusted every six months so that they shall reflect the record of bad debts for the previous six months' period based upon the collection experience for that period.

It is further understood that the Radiologist will not charge professional fees to indigent persons, nonpay clinic cases and persons to whom professional courtesy is customarily extended.

COMMENT

It should be noted in the above paragraph that the percentage is based upon billings rather than upon collections. This was because it is believed that it is much simpler from an accounting viewpoint to determine billings than to apportion collections where there is partial collection. Also, if the contract were to be based upon collections, it would be necessary to make payments over a period of years after the termination of the contract. In using billings as a base, if the parties desire to make an allowance for bad debts, this allowance must be tied to actual experience. In setting the contract up initially, the bad debt deduction should be based upon the record of the most recent collections for the Hospital. The bad debt allowance may be divided into in-patient and out-patient business or may be lumped together as the parties desire. If the parties feel that a bad debt allowance is too cumbersome they may eliminate this provision from the contract entirely.

An additional provision may be added to paragraph *Ninth* when it is customary for the Hospital or its employees to compensate the Radiologist for the cost of supplies and materials used in connection with work done for the Hospital

employees under the provisions of paragraph *Sixth* of this contract. These payments would be paid by the Hospital rather than the employee when the Hospital is carrying its Workmen's Compensation insurance ex-medical. Such a provision might provide as follows:

"In addition to the above payments provided for in this paragraph, the Hospital shall compensate the Radiologist for the cost of materials used in connection with the services performed in paragraph *Sixth* of this contract."

Tenth: In the performance of the work, duties and obligations devolving upon him under this contract, it is mutually understood and agreed that the Radiologist shall be and he at all times is acting and performing as an independent contractor practicing his profession of medicine and surgery and specializing in x-ray diagnosis and treatment; that the Hospital shall neither have nor exercise any control or direction over the methods by which the Radiologist shall perform his work and functions excepting that said Radiologist does by this contract agree to perform his said work and functions at all times in strict accordance with currently approved methods and practice in his professional specialty, and that the sole interest of the Hospital is to assure that said Diagnostic and Therapeutic X-ray work and service shall be performed and rendered in a competent, efficient and satisfactory manner. All applicable provisions of law relating to licensing and regulating of physicians or hospitals shall be fully complied with by all parties hereto. As a member of the medical staff the Radiologist will cooperate with and assist other members of the staff in preparation of clinical reports for publication and will use his best efforts to elevate the standing of the Hospital staff in the field of medical science by publication of unusual or interesting studies made in the Radiological Department.

Eleventh: This agreement shall remain in full force and effect for a term of _____ years from and after the _____, provided, however, that either of the parties hereto shall have the right and privilege of cancelling and terminating this agreement on _____ days' notice to the other and upon the expiration of said notice this agreement shall be and become of no further force or effect whatsoever and each of the parties hereto shall be relieved and discharged therefrom.

COMMENT

The above provision is effective if the arrangement is based upon a percentage of billings. If, however, the arrangement is based upon collections then it will be necessary to make some provision to compensate the Radiologist for his share of collections made for his work performed during the term of the contract, but collected after the termination of the contract. This could be done by accounting for the accounts receivable upon the books and deducting therefrom an allowance for expected bad debts based upon the experience of the Hospital for the previous period. Another method would be to provide that after the accounting for the collections for the current month, the Radiologist had no further interest in collections after that date. This is a matter of negotiation between the parties.

IN WITNESS WHEREOF, The Hospital has caused this agreement to be executed and its corporate seal to be hereunto affixed by its officers thereunto duly authorized and the Radiologist has executed this agreement by hereunto setting his hand as of the day and year first above written.

By _____

By _____

C.P.S. Fee Schedule

The following is a copy of a letter sent by California Physicians' Service to Dr. William L. Bender, chairman of the Fee Schedule Committee appointed by the Council of the California Medical Association to revise the C.P.S. fee schedule:

"Dear Doctor Bender:

"For the purpose of discussing the revised fee schedule prepared by your committee, the Board of Trustees of C.P.S. held a special two-day meeting on February 26th and 27th, most of which was devoted to a study of the schedule. Your letter of transmittal and the revised schedule had been mailed to the trustees two weeks before the meeting, so that all might be familiar with their content.

"Because of the tremendous amount of ground covered in this complete revision, it was felt advisable to appoint a sub-committee of the board to meet with members of your committee, in order to discuss financial implications, policy changes and other matters that were suggested by the Fee Schedule Committee. Dr. Goin appointed Dr. Kendrick Smith of Los Angeles (chairman), Dr. J. Frank Doughty of Tracy, Dr. Henry L. Gardner and Mr. Ransom M. Cook, both of San Francisco, with Drs. Larsen and Gardener to furnish any needed technical advice. It is my understanding that a meeting of this sub-committee with members of your committee has been arranged for March 5th, in order to discuss these questions frankly.

"The board has asked me to express to you and your committee our sincere appreciation for the tremendous job that you have done. We realize that it is timely that the fee schedule be completely reviewed with respect to overhead of the profession and recent developments in the practice of medicine. We also recognize the time and effort that the committee has put into this work, and assure you that every practical consideration will be given to your recommendations. We believe that members of the profession likewise should know of the fine job that you have done, and are so informing them."

Sincerely yours,

CHESTER L. COOLEY, M.D., *Secretary*

In Memoriam

BALL, WENDELL LEE. Died November 14, 1948, aged 36. Graduate of the University of Oregon Medical School, Portland, 1938. Licensed in California in 1938. Doctor Ball was a member of the Monterey County Medical Society, the California Medical Association, and the American Medical Association.

BEWLEY, MARIETTA HELEN. Died in Los Angeles, February 14, 1949, aged 75, of carcinoma. Graduate of the University of Southern California School of Medicine, Los Angeles, 1900. Licensed in California in 1901. Doctor Bewley was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

EDELSTEIN, JACOB A. Died November 1, 1948, aged 60. Graduate of Fordham University School of Medicine, 1918. Licensed in California in 1918. Doctor Edelstein was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

GRANT, JOHN FRANCIS. Died in Long Beach, January 18, 1949, aged 57. Graduate of Northwestern University Medical School, Chicago, 1917. Licensed in California in 1920. Doctor Grant was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

LOOMIS, FREDERIC MORRIS. Died in Piedmont, February 9, 1949, aged 71, of a heart ailment. Graduate of the University of Michigan Medical School, Ann Arbor, 1912. Licensed in California in 1917. Doctor Loomis was a retired member of the Alameda County Medical Association, and the California Medical Association.

MOULTON, DAN HAZEN. Died in Chico, February 10, 1949, aged 70, of a cerebral hemorrhage. Graduate of the University of California Medical School, Berkeley-San Francisco, 1902. Licensed in California in 1902. Doctor Moulton was a retired member of the Butte-Glenn County Medical Society, and the California Medical Association.

STAMLER, ALLAN ERWIN. Died in Corcoran, February 7, 1949, aged 46, of coronary thrombosis. Graduate of the University of Illinois College of Medicine, Chicago, 1926. Licensed in California in 1940. Doctor Stamler was a member of the Kings County Medical Society, the California Medical Association, and the American Medical Association.

STEIN, CHARLES. Died in Long Beach, January 22, 1949, aged 72. Graduate of the University of Nebraska College of Medicine, Omaha, 1907. Licensed in California in 1917. Doctor Stein was a retired member of the Los Angeles County Medical Association, and the California Medical Association.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Stanley R. Truman of Oakland was elected president-elect of the American Academy of General Practice at the organization's annual scientific assembly which was held last month in Cincinnati. He succeeds to the presidency in 1950. The Academy was founded in 1947 to raise the standards of general practice, to work with organizations of medical specialists toward improving medical care, and to promote education designed especially for the physician intending to enter general practice.

IMPERIAL

Dr. Clarence R. Kroeger has been appointed full-time health officer of Imperial County. Dr. Kroeger, formerly with the health department of Tucson, Arizona, takes the place of Dr. Burke E. Schoensee who had been serving on a part-time basis.

LOS ANGELES

Three cancer training grants, one for the University of California at Los Angeles School of Medicine and two to the University of Southern California School of Medicine were made last month by the National Cancer Institute. The grant to U.C.L.A. was \$10,000 for evaluation of cancer diagnostic tests under the direction of Dr. Andrew H. Dowdy. One of the U.S.C. grants was \$25,000 for expansion of the present training program under Dr. Ian Macdonald, and the other was \$5,000 to support improvements in a training program under Dr. George S. Sharp.

HUMBOLDT

Dr. Myron W. Husband, formerly of Burbank, recently was appointed health officer of Humboldt County.

SACRAMENTO

Dr. D. F. Dozier has been elected president of the Sacramento chapter of the American Academy of General Practice. He succeeds Dr. John Gregory Walsh, who was elected president at the first meeting last fall to serve during the organizational period of the chapter. Other officers are Dr. John Long, vice-president; Dr. John Royane, secretary-treasurer; Dr. Dan Kilroy, chairman of the membership committee; and Dr. Peter Koch, chairman of the program committee.

SAN FRANCISCO

Dr. John A. Anderson of the University of Utah has been appointed professor of pediatrics and head of the pediatric department of the Stanford University School of Medicine, it was announced recently. In these positions, which he will assume September 1, Dr. Anderson will succeed Dr. Harold K. Faber, who will become professor emeritus at that time.

* * *

Promotion of four members of the faculty of Stanford University School of Medicine to full professorships, two to associate professorships and two to assistant professorships was announced last month. A list of the promotions, which

become effective September 1 at the beginning of the academic year, follows:

To professor: **Donald James Gray**, Ph.D., anatomy; **Donald E. King**, M.D., surgery (bone and joint); **Hadley Kirkman**, Ph.D., anatomy; **John Kent Lewis**, M.D., medicine.

To associate professor: **Robert Hastings Dreisbach**, M.D., pharmacology; **Robert Stuart Turner**, Ph.D., anatomy.

To assistant professor: **Frederick A. Fuhrman**, Ph.D., physiology; **Clarence M. Tinsley**, M.D., medicine.

* * *

Continuing a reciprocal exchange of personnel between the two schools, Stanford University School of Medicine has granted to **Dr. Frank Gerbode**, assistant clinical professor of surgery, a five-month leave of absence for medical research and teaching at Saint Bartholomew's Hospital, London. Last year Dr. Frank Rundle, assistant director of the surgical professorial unit at St. Bartholomew's, visited Stanford on a Rockefeller Fellowship.

* * *

Two postgraduate courses, one in obstetrics and gynecology and one in psychiatry and neurology, have been announced by the University of California Medical School, University Extension. The course in **obstetrics and gynecology** will be held July 5-8, 1949, and that in **psychiatry and neurology**, a repetition of a previous course, is scheduled for the 12 weeks August 29 through November 18. Both are to be held in San Francisco. Applications for registration and requests for further information should be directed to **Stacy R. Mettier**, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

SAN JOAQUIN

Dr. Elmer M. Bingham, a member of the staff of the San Joaquin Local Health District since 1946, recently was named director of the district to succeed Dr. John J. Sippy, who died only a short time after he resigned the directorship March 1. Dr. Sippy organized the District 26 years ago and had served as its director until his resignation.

GENERAL

According to word received by the State Department of Public Health, **production of Rocky Mountain spotted fever vaccine has been discontinued** by the U.S. Public Health Service laboratory at Hamilton, Montana. Neither the tick-tissue type vaccine nor the chick-embryo type which superseded it will be made hereafter, but tick-tissue vaccine will be available as long as the present supply lasts.

Commercial laboratories now manufacture chick-embryo type vaccine for Rocky Mountain fever in adequate quantity. Branch offices in the West from which it may be obtained are identified by Dr. Wilton T. Halverson, state director of public health, as follows:

Los Angeles, Calif:

Lederle Laboratories, 2811 Leeward Ave. (Zone 5).
Sharp & Dohme, 2821 East Pico Blvd. (Zone 23).
E. R. Squibb & Sons, 1855 Industrial St. (Zone 21).

San Francisco, Calif.:

Lederle Laboratories, 883 Mission St. (Zone 3).
 Sharp & Dohme, 132 Second St. (Zone 5).
 E. R. Squibb & Sons, 690 Fourth St. (Zone 7).

Denver 2, Colo.:

Lederle Laboratories, 444 Fourteenth St.
 Sharp & Dohme, 1525 Wynkoop St.

Portland 12, Ore.:

Sharp & Dohme, 3808 North Williams Ave.

Salt Lake City 1, Utah:

Lederle Laboratories, 351 South Main St.

Seattle, Wash.:

Lederle Laboratories, 703 Terminal Sales Bldg. (Zone 1).
 E. R. Squibb & Sons, 804 Sixth Ave., S. (Zone 4).

* * *

A warning that **Syrup of Urethane**, a cough syrup manufactured by Marvin R. Thompson, Inc., **may cause a dangerous lowering of the white blood cell count** when used in the quantity recommended on the label, has been issued by the Federal Food and Drug Administration. Seizure of the product is being made by the Administration and the manufacturer has acted to recall it from the market, but the manner and extent of distribution are such that neither the manufacturer nor federal, state and local health officers will be able to locate all bottles promptly, the federal agency said. More than 2,300 gallons of the product have been distributed to physicians, wholesale druggists and retail pharmacists in packages ranging in size from half-ounce physicians' samples to one-gallon bottles.

* * *

The **American Congress of Physical Medicine** will hold its 27th annual scientific and clinical session September 6-10, 1949, at the Netherland Plaza Hotel, Cincinnati. All sessions will be open to members of the medical

profession in good standing with the American Medical Association. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

* * *

The first scientific meeting of the recently organized **American Academy of Neurology** is scheduled for June 1-3 at French Lick Springs, Indiana.

Established to "further and encourage the practice of clinical neurology and to stimulate teaching and research in neurology and allied sciences," the Academy at present has 500 members. Active membership is open to physicians who have been certified in neurology. Junior membership is available to physicians engaged in postgraduate studies in neurology or who are awaiting certification in neurology. In addition, there is an associate membership for those who are not certified in neurology but whose interests are in fields related to neurology.

* * *

The **Western Association of Industrial Physicians and Surgeons** will hold its annual meeting in the Biltmore Hotel, Los Angeles, Saturday, May 7, the day before the opening of the California Medical Association Annual Session. Scheduled for discussion at the meeting, which is to start at 9:15 a.m. and continue until 5 p.m., are matters dealing with state compensation insurance and its administrative problems. The industrial section of the State Nurses Association and members of the Western Association of Industrial Nurses have been invited as guests for the session. There will also be a discussion of technical subjects of interest to industrial physicians. Further details or copies of the program may be obtained by writing to Jerome Shipping, M.D., president, 740 South Olive Street, Los Angeles 14, or to the secretary, Christopher Leggo, M.D., California and Hawaiian Sugar Refining Corporation, Ltd., Crockett, Calif.

Annual Golf Tournament

Under the auspices of the Southern California Medical Golf Association, the Annual Golf Tournament will be held Monday afternoon, May 9, at the Los Angeles Country Club. All members attending the meeting are welcome to play. Numerous prizes will be awarded. Make reservations with Clyde O. Wood, M.D., secretary, Southern California Medical Golf Association, 9629 Brighton Way, Beverly Hills, telephone, CRestview 1-5205.

BOOK REVIEWS

THE SHAME OF THE STATES. By Albert Deutsch. Harcourt, Brace and Company, New York, 1948. \$3.00.

Albert Deutsch's book is an outgrowth of a series of articles on current conditions in state mental hospitals which he wrote for the *New York Star*. It is a journalistic survey with a camera-documented story of conditions in public mental hospitals. The author is a leader in the field of humanitarian journalism. His earlier book, "The Mentally Ill in America—A History of Their Care and Treatment from Colonial Times," provided a good background for his investigations.

The author states that he visited about two-score mental institutions, but he reports on only about a dozen. The faults of these institutions are primarily reported. The statistical data are meagre. The presentation of facts is journalistic in manner. An interpretive formulation to account for the defects is put forth. The blame is laid at the doorsteps of the state hospital system. The author emphasizes that in the final analysis the public is responsible for it. The primary purpose of the book is to acquaint the public with the need for and to arouse support toward reform of state mental institutions.

A few criticisms may be ventured. The reviewer happens to have visited five of about the dozen mental institutions which were reported on. While admitting of the great need for tremendous improvement, in some instances the defects were somewhat exaggerated, the services minimized, and the limitations were not sufficiently appreciated by the author. In places, attempts are made to secure emotional appeal rather than to present neutral facts.

Nevertheless, the book for the most part correctly describes a great need in a popular way. It fills a gap in public education between the newspaper "asylum horror tale" and the colorless scientific statistics of professional research. It is a book that can be recommended to be read by all, lay as well as professional people.

* * *

THE RENAL ORIGIN OF HYPERTENSION. By Harry Goldblatt, M.D., C.M., Director, Cedars of Lebanon Hospital, Professor of Pathology, University of Southern California. Charles C. Thomas, Publisher, Springfield, Illinois, 1948. \$2.75.

From time to time since his first reports on the experimental production of arterial hypertension, Goldblatt has reviewed critically the pertinent literature and presented his own views. In this short monograph, one of the American Lecture Series, he indicates clearly why he believes human essential hypertension to be of renal origin. Not as detailed as previous reviews of the subject by Goldblatt or others, and without the "practical" aspects so often desired by practitioners, the book seems very well suited to the student of medicine whether he be in practice or in medical school.

* * *

MANUAL OF PUBLIC HEALTH—HYGIENE. By J. R. Currie, M.D., Professor-Emeritus of Public Health, University of Glasgow, and A. G. Mearns, M.D., Senior Lecturer and Examiner in Hygiene, University of Glasgow. Third edition. 212 illustrations, four color plates. The Williams and Wilkins Company, Baltimore, 1948. \$9.00.

This comprehensive text on hygiene from the British viewpoint pretty well covers the field of preventive medicine and what is called by Oxford "Social Medicine" and Cambridge "Human Ecology."

"Hygiene" is designed for medical and public health students and for practitioners of public health. The definitions given are usually legal in nature. For example,

mental defectiveness is defined as "a condition of arrested or incomplete development of mind existing before the age of 18 years." In whatever field of hygiene there are laws or regulations, the gist of these is given.

The major part of the work is devoted to the basic functions of organized public health service, such as maternal and child health, statistics, food hygiene, housing, and industrial and mental hygiene. There is an excellent section on food poisonings of various types with good color illustrations. The chapter on "Community Diseases" is unique in its scope.

The last chapter of the book entitled "The Social Vista" gives a factual statement of the various insurance and public assistance laws, and the relationship of the general practitioner and public health officer to these laws is indicated.

* * *

AN EVALUATION OF SELECTED SCHOOLS OF NURSING WITH RESPECT TO CERTAIN EDUCATIONAL OBJECTIVES. By Helen Nahm, Director of the Division of Nursing Education, Duke University, Durham, N. C. Published for the American Psychological Association by Stanford University Press, 1948. \$2.00.

This is essentially a statistical report on many questions posed to determine whether student nurses are satisfied with nursing as a profession, whether or not professional nurses: are democratic rather than autocratic in their beliefs and practices, apply principles of mental hygiene, are well adjusted, have a wide range of social, cultural and recreational interests and activities, and are interested in and understand current social, political and economic problems and issues.

For many years nursing educators have agreed on desirable objectives of nursing education. The author chose a limited number of them and administered questionnaires to 428 senior students in 12 schools of nursing in Minnesota. Of this number, 27 per cent were enrolled in degree programs and 73 per cent in three-year programs.

Since hundreds of test items were used and the results of many are tabulated and graphed, only by studying the questions and the responses carefully can one glean specific information on the test results.

In general, the conclusions are not surprising. The findings seem to indicate that first and foremost there is need for better preparation of faculty members for schools of nursing, that many schools of nursing are not being conducted as truly educational institutions, that an authoritarian rather than democratic philosophy prevails in some schools, that shorter hours of work are needed as well as better health supervision and programs, and that there is a necessity for improved recreational and social facilities.

* * *

MANUAL OF CLINICAL LABORATORY METHODS. By Opal E. Hepler, Ph.D., M.D., Associate Professor of Pathology, Northwestern University Medical School. With foreword by James P. Simonds, Ph.D., M.D., Charles C. Thomas, Publisher, 201 East Lawrence Ave., Springfield, Illinois, 1949. \$8.50.

This book is an expanded outline of laboratory methods prepared for use in the teaching of medical students and laboratory technicians. It is not designed to be a textbook of clinical pathology and does not discuss the clinical significance of the results of the tests.

The reviewer can give this book high praise: it does what it sets out to do and serves a most useful purpose. It may be highly recommended for any laboratory, for technicians and for medical students; but it is for the small laboratory

which is an adjunct to the office of the practicing physician that it should prove especially helpful. The physician or the technician may readily find information about unfamiliar tests or laboratory methods which he has forgotten. The writing is explicit. Each procedure is detailed in step by step construction. For each test, the principles, general considerations, methods of performance, normal values, and interpretation of findings are listed in order. There are good charts and plates summarizing the findings of such essential laboratory data as the cerebrospinal fluid findings in diverse disease conditions, the morphological appearances of red and white blood cells, and the normal and pathological values in hematology. Diagrams are frequently used to illustrate different pieces of apparatus. The print is large, so that the volume may be left open on a table and read from a distance. The construction is sturdy.

There is little that can be said against this book. One may rightly assert that the references to source work are too few and that the tests given are not at all inclusive, but these are minor criticisms. They do not detract from the fact that the author has done a first class, clear, practical job.

* * *

nizing the limitations inherent in the nature of the problem, the author takes a proper attitude of hopefulness toward it. Physicians with such patients might well recommend this book to the parents for their encouragement.

THE FRONTAL LOBES. Proceedings of the Association for Research in Nervous and Mental Disease. December 12 and 13, 1947, New York. 237 illustrations, 39 tables. Vol. XXVII. The Williams and Wilkins Company, Baltimore, 1948. \$12.50.

This record of the meeting of the Association for Research in Nervous and Mental Disease in the last month of 1947 contains almost all human knowledge of the form and function of the frontal lobes. Inspired by recent interest in frontal lobe function incidental to the section of this lobe for psychiatric disease and intractable pain, it far transcends this limited outlook. The contributions of the various members range from the broadly philosophical to the micro-anatomical.

There are four main divisions, entitled Biology of the Frontal Lobes, Experimental Studies, Clinical Studies, and Frontal Lobotomy. It is doubtful if any reader will find himself equipped to follow competently all of the discourses, but it is equally certain that every physician will find some of the contributions of great interest. Certainly, anyone who ever has occasion to consider frontal lobotomy as a therapeutic procedure cannot do better than to familiarize himself with the information contained in this book.

* * *

AN INTRODUCTION TO SURGERY, Fourth Edition. By Rutherford Morison, M.D., F.R.C.S., Edin. Formerly Professor of Surgery, Durham University, and Charles F. M. Saint, C.B.E., M.D., M.S., F.R.C.S. Formerly Professor of Surgery, Cape Town University, South Africa. The Williams and Wilkins Company, Baltimore, Maryland, 1948. \$10.00.

This book represents an elementary introduction to surgery, covering basic principles such as shock, hemorrhage, inflammation, malignant disease, tuberculosis, syphilis, bone disease and fractures as well as other subject matters. A good part of the material is presented very briefly in outline form. Too many pages are devoted to syphilitic and tuberculous lesion that may be common in South Africa, but are unusual or rare in this country.

Parts of the book, written as a result of the personal experience of the senior author, are presented in a conversational manner. The book is necessarily sketchy because it is rather small and still covers a wide latitude of conditions. One wonders whether a practitioner might better refer to a more comprehensive textbook of surgery which would take up each of the problems in more detail.

CONDITIONED REFLEXES AND NEURON ORGANIZATION. By Jerzy Konorski, head of the Department of Neurophysiology in the Nencki Institute of Experimental Biology and Professor in the University of Lodz. Translated from the Polish Ms. under the author's supervision by Stephen Garry. Cambridge University Press—The Macmillan Company, 60 Fifth Ave., New York 11, N. Y., 1948. \$4.00.

This short book is dedicated by the author to Pavlov and Sherrington "in the hope that this work will do something to bridge the gulf between their respective achievements." As the book was written by a man who at one time was a member of the Pavlovian school, one can look to it with some confidence as an authoritative source of information on the theories of conditioned reflexes. In this regard it is of considerable value in making accessible to English readers much that is otherwise difficult to find. Whether the attempt to reconcile or modify Pavlov's theories to fit in with modern concepts of neurophysiology has done more than to introduce yet another theory of integrated nervous activity remains to be seen.

The presentation is clear enough, but quite complicated, and it is a book which needs a good deal of digestion. It is aimed more at the neurophysiologist than the physician.

YOUR CHILD OR MINE—THE STORY OF THE CEREBRAL-PALSYED CHILD. By Mary Louise Hart Burton in collaboration with Sage Holter Jennings. Coward-McCann, Inc., New York, 1949. \$1.25.

This booklet tells the stories of several patients with cerebral palsy and how by proper supervision, education and training they were enabled to adjust themselves to their handicaps and to live useful and happy lives. While recog-



MEDICAL JURISPRUDENCE

COMPENSATION FOR PROFESSIONAL SERVICES RENDERED

PEART, BARATY & HASSARD of the California Bar

When a physician renders professional services to a person who subsequently dies, or to an incompetent person, or to a minor, or to a person who later is adjudged bankrupt, the problem of determining the correct procedure to obtain compensation becomes exceptionally important. This article will concern itself, therefore, with the procedures whereby compensation for professional services rendered by a physician to persons in any of those four classes may be obtained.

1. *Claim Against the Estate of a Decedent:*

Where a physician has rendered professional services to a person who subsequently dies before paying the physician's fees, it is necessary to seek compensation from the estate of that deceased person. The method of collecting this compensation is governed by the California Probate Code and a failure to follow its requirements is likely to result in inability to secure payment. Upon the death of a person leaving an estate if there is a will, an executor is appointed. If there is no will, then an administrator of the estate is appointed. Upon the appointment of the executor or administrator, a "notice to creditors" must be published in a newspaper at least once a week for a period of four weeks. At any time within six months from the date of first publication of this notice to creditors, persons having claims against the estate of the decedent may file such claims with the executor or administrator, or the clerk of the superior court.

Anyone to whom the decedent was indebted, who fails to present a claim in the form required by law within this six months' period, *thereby forfeits his right to payment from the estate.* Thus it is absolutely essential, upon the death of a person from whom compensation is due, to ascertain the date of first publication of notice to creditors and file a proper creditor's claim within six months thereafter.

Creditor's claims must be in the form required by the Probate Code. They must be in writing and must set forth with reasonable particularity the nature of the claim. In addition they must include the amount due and must be accompanied by an affidavit of the claimant, or someone on his behalf, that the amount is justly due; that no payments have been made thereon by the decedent which are not credited and that there are no offsets to the claim to the knowledge of the claimant. After a creditor's claim is prepared it must be sworn to before a notary public and must then be presented either to the executor or administrator, or to the clerk of the superior court wherein probate of the estate is pending.

After a creditor's claim is presented to the executor, administrator or clerk of the court, it may be allowed or it may be rejected in part and allowed in part. It may also be wholly rejected by the executor or administrator. If it is allowed, it is then submitted for the approval of the court, and if approved, it must be paid before any assets may be distributed to the heirs, devisees or legatees. If allowed for only a portion of the claim, or entirely rejected, the claimant may acquiesce and, of course, he then does not receive full compensation. But if the claimant does not acquiesce, he must commence legal action against the estate on the rejected claim within three months after the date of service upon the claimant of notice of rejection. If the executor or administrator fails to take affirmative action on the claim, such failure to act may be treated by the claimant as equivalent to a rejection and the claimant may seek recourse by way of a legal action.

2. *Claims Against the Estate of an Incompetent Person:*

When professional services are rendered for a person who is, or subsequently becomes, incompetent, compensation for such services can be had from the guardian of that person's estate. A person who is incompetent within the meaning of California Probate Code Section 1460 is supposed to be under the care of a guardian of his person and estate appointed by the superior court. A statement for services rendered should be presented to the guardian.

In order to be compensable, professional services rendered to such a person should be rendered at the request of the guardian if one has been appointed, for then the guardian is responsible therefor, but only out of assets of the estate of the incompetent; that is to say, a guardian may not be required to pay for the professional services rendered out of his own funds unless he has previously agreed to do so.

3. *Compensation for Services Rendered to Minors:*

When services are rendered to minors, at the request of either parent, or a guardian appointed by the superior court, compensation for those services is recoverable from the parent, or from the guardian.

If professional services are rendered to a minor without the direction or authorization of his parent or guardian, it is still possible that compensation may be recovered from the minor. California Civil Code Section 36 provides that a minor

"can not disaffirm a contract, otherwise valid, to pay the reasonable value of things necessary for his support or that of his family, entered into by him when

not under the care of a parent or guardian, able to provide for him or them; provided, that these things have been actually furnished to him or to his family."

There are three important points which should be noted in this section. First, an agreement by a minor alone to pay for professional services rendered to him may be enforceable against him. Second, whether enforceable or not as against the minor, it may be enforced against his parents.

Third, a contract on the part of a minor to pay the reasonable value of things necessary for his support is only valid and enforceable when he is not under the care of a parent or guardian able to provide for him.

4. Claims Against a Bankrupt:

If a patient either by voluntary or involuntary action is adjudged bankrupt, after professional services have been rendered, but before payment therefor has been made, it is necessary for the physician to present a claim against the patient's estate in bankruptcy. A claim in bankruptcy must be established by the filing with the referee of bankruptcy appointed by the court a written statement under

oath signed by the claimant setting forth the nature of the claim and the consideration therefor, whether or not any security is held by the claimant and that the sum claimed is justly owing from the bankrupt to the claimant. This claim must be filed within six months after the appointment of the trustee in bankruptcy.

Forms for establishing proof of claim in bankruptcy can be obtained and in making proof of claim the form prescribed by the Supreme Court of the United States should be used.

If a person goes into bankruptcy and lists as one of his creditors a physician who has performed professional services on his behalf and such physician does not within six months from the date of adjudication of bankruptcy file a claim in the proper manner, all legal right to secure any compensation for such services is lost.

In conclusion it may be noted that a claim by a physician for compensation for professional services rendered to any of the persons in the above four categories must strictly comply with the forms and the time limitations prescribed by law.





E. VINCENT ASKEY
President



R. STANLEY KNEESHAW
President-Elect

PROGRAM AND PRE-CONVENTION REPORTS

for the

CALIFORNIA MEDICAL ASSOCIATION

Seventy-eighth Annual Session

Los Angeles, May 8-11, 1940

Biltmore Hotel



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Guest Speakers

L. Howard Schriver, Cincinnati, Ohio—President, Associated Medical Care Plans, Inc., The National Association of *Blue Shield* Plans.

Nathan A. Womack, Iowa City, Iowa—Professor of Surgery, Head of Department of Surgery, Iowa State University School of Medicine.

George E. Burch, New Orleans, Louisiana—Professor of Medicine and Chairman of the Department of Medicine, Tulane University.

Anderson Hilding, Duluth, Minnesota—Clinical Professor of Otology, University of Minnesota Medical School.

Kellogg Speed, Chicago, Illinois—Clinical Professor of Surgery (Rush), University of Illinois.

Chester M. Jones, Boston, Massachusetts—Clinical Professor of Medicine, Harvard Medical School.

* * *

SECTION GUESTS AND ADDITIONAL INVITED SPEAKERS

J. Harvey Black, Dallas, Texas—Professor of Clinical Medicine, Southwestern Medical Foundation.

R. H. Flocks, Iowa City, Iowa—Professor of Genito-Urinary Surgery, Iowa State University School of Medicine.

Frederick E. Mohs, Madison, Wisconsin—Associate Professor of Chemosurgery, University of Wisconsin School of Medicine.

Mr. Wm. A. Richardson, Rutherford, New Jersey—Editor, *Medical Economics*.

Homer P. Rush, Portland, Oregon—Clinical Professor of Medicine, Head of the Department of Cardiology, University of Oregon Medical School.

Herman Sharlit, New York City—Assistant Professor of Clinical Dermatology and Syphilology, Postgraduate Medical School, New York University, and Associate Director of the Skin and Cancer Unit, University Hospital.

Lulu K. Wolf, R.N., Los Angeles—Professor of Nursing, and Chairman, Department of Nursing, University of California at Los Angeles.

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Sidney J. Shipman (1950).....	Councilor-at-Large		
Wilbur C. Bailey (1950).....	Councilor-at-Large		
C. V. Thompson (1949).....	Councilor-at-Large		
ELECTED DELEGATES (204)		Inyo-Mono County (1)	
Delegates	Alternates	Kern County (3)	
Alameda County (15)		Sophie L. Goldman	S. G. Kearney
Cyril J. Attwood.....	John Blum	Chester I. Mead	Carl Moore
Leonard Barnard.....	Clark J. Burnham	Roderick A. Ogden	J. E. Vaughan
John C. Bartlett.....	R. Abbott Crum		
H. Chesley Bush.....	James Frug		
William G. Donald.....	Elmo M. Grimmer		
Grant Ellis.....	Samuel P. Hall		
James B. Graeser.....	Lester B. Lawrence		
James T. Harkness.....	Elwood W. Lyman		
Ernest W. Henderson.....	Thomas T. Nickels		
Arthur J. Hunnicutt.....	Robert S. Peers		
Lloyd Kindall.....	Paul C. Samson		
Paul P. Michael.....	Victor E. Sharbaro		
James Raphael.....	P. R. Shumaker		
T. E. Reynolds.....	Richard A. Young		
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Hollis L. Carey.....	Louis C. Olker	Wilbur C. Batson	Fred Davis, Jr.
Contra Costa County (2)		Kings County (1)	
Kaho Daily.....	George Husser	William F. Chamlee	Robert G. Moles
L. H. Fraser.....	Christopher Leggo		
Fresno County (4)		Kings County (1)	
C. H. Covington.....	F. Harold Downing		
Neil J. Dau.....	O. B. Doyle		
E. C. Halley.....	W. H. Gilliatt		
Elliot Sorsky.....	C. S. Mitchell		
Humboldt County (1)		Lassen-Plumas-Modoc County (1)	
O. R. Myers.....	Joseph S. Woolford	Wilbur C. Batson	Fred Davis, Jr.
Los Angeles County (81)		Los Angeles County (81)	
Alameda County (15)		Marden A. Alsberg	Jack K. Afflerbaugh
Cyril J. Attwood.....	John Blum	S. M. Alter	Madeline J. Algee
Leonard Barnard.....	Clark J. Burnham	A. J. Annis	E. W. Alsberg
John C. Bartlett.....	R. Abbott Crum	Elmer J. Ball	Elmer L. Anderson
H. Chesley Bush.....	James Frug	Roger W. Barnes	Daniel Beltz
William G. Donald.....	Elmo M. Grimmer	John V. Barrow	Samuel C. Benadom
Grant Ellis.....	Samuel P. Hall	A. Elmer Belt	R. T. Bergman
James B. Graeser.....	Lester B. Lawrence	Terry C. Bennett	John E. Bergmann
James T. Harkness.....	Elwood W. Lyman	B. J. Bergstrom	Kenneth H. Boyer
Ernest W. Henderson.....	Thomas T. Nickels	Frederick K. Bergstrom	Lyman A. Brewer
Arthur J. Hunnicutt.....	Robert S. Peers	Clarence J. Berne	John R. Brophy
Lloyd Kindall.....	Paul C. Samson	John W. Beswick	L. C. Burwell
Paul P. Michael.....	Victor E. Sharbaro	Robert L. Blackmun	Tenero D. Caruso
James Raphael.....	P. R. Shumaker	Edwin F. Boyd, Sr.	John L. Caster
T. E. Reynolds.....	Richard A. Young	Kenneth C. Brandenburg	Victor Cefalu
Stanley R. Truman.....		James L. Bray	Burr Dalton
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Hollis L. Carey.....	Louis C. Olker	George E. Brown	Kenneth S. Davis
Contra Costa County (2)		Richard O. Bullis	M. A. Desmond
Kaho Daily.....	George Husser	George W. Caldwell	Karl L. Dieterle
L. H. Fraser.....	Christopher Leggo	Donald Cass	J. James Duffy
Fresno County (4)		Rafe C. Chaffin	Milo Ellik
C. H. Covington.....	F. Harold Downing	Burt T. Church	Homer S. Elmquist
Neil J. Dau.....	O. B. Doyle	Wells C. Cook	Charles V. Emerson
E. C. Halley.....	W. H. Gilliatt	Clair P. Cosgrove	Ralph A. Ferguson
Elliot Sorsky.....	C. S. Mitchell	Jay C. Cosgrove	Charles A. Fouks
Humboldt County (1)		William E. Costolow	Garland F. Garrett
O. R. Myers.....	Joseph S. Woolford	Charles H. Cowgill	Glenn G. Graham
Los Angeles County (81)		Frank G. Crandall, Jr.	Francis E. Guinney
Alameda County (15)		Lawrence L. Craven	Russel C. Hadley
Cyril J. Attwood.....	John Blum	Philip J. Cunnane	Donald Q. Heckel
Leonard Barnard.....	Clark J. Burnham	G. R. Dunlevy	J. Severy Hibben
John C. Bartlett.....	R. Abbott Crum	Franklin Farman	Walter M. Holleran
H. Chesley Bush.....	James Frug	Ward L. Fisher	Leland G. Hunnicut
William G. Donald.....	Elmo M. Grimmer	Paul D. Foster	Arthur H. Hurd
Grant Ellis.....	Samuel P. Hall	Benjamin Frees	Theodore S. Kimball
James B. Graeser.....	Lester B. Lawrence	F. J. Gaspard	Carl E. Krugmeier
James T. Harkness.....	Elwood W. Lyman	Charles W. Gilfillan	E. R. Lamberton
Ernest W. Henderson.....	Thomas T. Nickels	Joseph Goldstein	Arthur J. Langen
Arthur J. Hunnicutt.....	Robert S. Peers	Lawrence M. Hill	F. E. Leffingwell
Lloyd Kindall.....	Paul C. Samson	Elizabeth Mason Hohl	C. Harry Linsley
Paul P. Michael.....	Victor E. Sharbaro	Howard P. House	Ben D. Massey

<i>Delegates</i>	<i>Alternates</i>	<i>Delegates</i>	<i>Alternates</i>
Harry H. Jacob Ludwig L. Kaftan Arthur A. Kirchner Herbert J. Kirchner T. J. Laughlin William H. Leake Thomas A. LeValley H. Clifford Loos J. Lafe Ludwig L. Duke Mahannah John B. Marr Robert W. Meals Arthur J. Mendenhall William R. Molony, Sr. James J. Morrow J. C. Negley Clarence H. Nelson Alonzo J. Neufeld Edward F. Nippert J. Norman O'Neill Frank W. Otto George F. Paap Louis J. Regan E. T. Remmen J. M. de los Reyes S. Gordon Ross Eric A. Royston John C. Ruddock Carl F. Rusche J. P. Sampson Joseph C. Savage Frank F. Schade J. Edward Short Ralph T. Smith William H. Snyder Buell H. Sprague Justin J. Stein Clinton H. Thienes Warren A. Wilson	S. S. Mathews W. O. McDermott M. W. McDougall H. G. McNeil Hyman Miller Oliver M. Moore Carl L. Mulfinger A. D. Myers Charles F. Nelson M. L. Newkirk Jack Nichols Ross V. Parks Bernard Pearson Emmet A. Pearson Stirling Pillsbury Milton M. Portis Frederick G. ReBell James F. Regan Paul A. Reiche Gordon L. Richardson Harry A. Roth Henry P. Rover Richard C. Rush Edward S. Ruth Emmett L. Schield Frederick C. Schlumberger Paul F. Seitter Harry A. Smith Karl F. Stadlinger Alfred H. Swan Packard Thurber, Jr. Frederick M. Turnbull Joseph A. Waishe E. Richmond Ware Walter Wessels John W. Whitsett Louis F. X. Wilhelm Daniel L. Woods William T. Zimmermann	H. Glenn Bell William L. Bender Gerson R. Biskind William G. Burkhard Edmund Butler L. R. Chandler Martin W. Debenham G. Dan Delprat Lloyd B. Dickey Frederick S. Foote Ivan C. Heron Alson R. Kilgore Carleton Mathewson, Jr. M. Laurence Montgomery Clayton D. Mote Charles A. Nohle, Jr. J. Marion Read Emmet L. Rixford Francis Rochex William L. Rogers Robert A. Scarborough H. Brodie Stephens William A. Summer Robertson Ward Helen B. Weyrauch David A. Wood	Dorothy W. Atkinson Walter Beckh Lois H. Brock Donald A. Carson Chester L. Cooley Lawrence R. Custer Anthony B. Diepenbrock William T. Duggan Henry L. Gardner Frank L. A. Gerhode Henry Gibbons III Keene O. Haldeman Allen T. Hinman Clyde D. Horner Charles W. Leach James J. McGinnis Edmund J. Morrissey Thomas F. Mullen Leon O. Parker Wesley E. Scott Ralph Scovel Samuel R. Sherman Abraham B. Sirbu Donald R. Smith William W. Washburn A. Justin Williams
Carl W. Clark Louis L. Robinson	Marin County (2)	J. Frank Doughty Jack Eccleston Neill Johnson	San Joaquin County (3)
Clemens M. Beil	Edward Campion Rafael G. Dufficy	Robert O. Pearman	C. A. Broaddus Ray Owens George Wever
George Pimentel	Mendocino-Lake County (1)	Richard T. Treadwell	San Luis Obispo County (1)
J. B. McCarthy A. L. Wessels	E. C. Bennett	Carl Benninghoven Logan Gray Stuart Lindsay	San Mateo County (3)
Dwight H. Murray	Merced County (1)	Douglas McDowell Alfred B. Wilcox	Santa Barbara County (3)
William M. Miller	Monterey County (2)	Burt Davis Thomas N. Foster J. P. Josephson Leslie B. Magoon James C. Muir John Hunt Shephard	Santa Clara County (6)
Fred Clark Frederick A. Veitch	Napa County (1)	Luther Newhall Samuel B. Randall	Santa Cruz County (2)
Orrin Cook Dave F. Dozier Dan O. Kilroy Dudley Saeltzer James H. Yant	Orange County (4)	H. T. Hinman	Shasta County (1)
Eberle C. Sheldon	Placer-Nevada-Sierra County (1)	J. B. McGuire	Siskiyou County (1)
Meredith G. Beaver Carl M. Hadley J. Needham Martin E. L. Tisinger Arthur E. Varden	Riverside County (2)	Carlton C. Purviance Felix J. Rossi, Jr.	Solano County (2)
Douglas H. Batten William C. Black E. A. Blondin Morton N. Carlile Roger C. Isenhour Francis E. Jacobs Hirman D. Newton R. J. Prentiss Wesley S. Smith	Sacramento County (5)	Cuthbert M. Fleissner Donovan C. Oakleaf	Sonoma County (2)
H. G. Holder John S. Martin A. E. Moore Willard H. Newman Thomas F. O'Connell J. G. Omelvena James W. Ravenscroft J. T. Wells F. E. West	San Benito County (1)	John H. Czatt Andrew van de Pol	Stanislaus County (2)
H. G. Holder John S. Martin A. E. Moore Willard H. Newman Thomas F. O'Connell J. G. Omelvena James W. Ravenscroft J. T. Wells F. E. West	San Bernardino County (5)	E. R. Wilson	Tehama County (1)
H. G. Holder John S. Martin A. E. Moore Willard H. Newman Thomas F. O'Connell J. G. Omelvena James W. Ravenscroft J. T. Wells F. E. West	San Diego County (9)	W. B. Parkinson W. A. Winn	Tulare County (2)
H. G. Holder John S. Martin A. E. Moore Willard H. Newman Thomas F. O'Connell J. G. Omelvena James W. Ravenscroft J. T. Wells F. E. West		A. A. Morrison G. K. Ridge	Ventura County (2)
		John Homer Woolsey	Yolo County (1)
		Stanley R. Parkinson	Yuba-Sutter-Colusa County (1)
			John Wesley Lindstrum

Agenda of House of Delegates Meetings

1949 Annual Session

(46th Annual Session)

The House of Delegates will meet in the Music Room of the Hotel Biltmore

Speaker, L. A. ALESEN, Los Angeles

Vice-Speaker, DONALD CHARNOCK, Los Angeles

Secretary, L. HENRY GARLAND, San Francisco

FIRST MEETING

Sunday, May 8, 1949, at 4:30 p.m.

ORDER OF BUSINESS

1. Call to order.
2. Report of Committee on Credentials, and Organization of the House of Delegates.
3. Roll call.
4. Announcement and approval of Reference Committees.
 - (a) Committee on Credentials. (Delegates must register with the Committee.)
 - (b) Reference Committee on the Reports of Officers, the Council and Standing and Special Committees. (Reference Committee No. 1.)
 - (c) Reference Committee on Finance, to review the reports of the Secretary-Treasurer and the Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year. (Reference Committee No. 2.)
 - (d) Reference Committee on Resolutions, Amendments to the Constitution and By-Laws and New and Miscellaneous Business. (Reference Committee No. 3.)
 - (e) Reference Committee on Executive Session, to consider business brought before the House of Delegates in Executive Session. (Reference Committee No. 4.)
5. Address by President—E. Vincent Askey.
6. Miscellaneous announcements by the Speaker. (Stenographic service, to secure triplicate copies of resolutions, etc.)
7. Report of the Council—Edwin L. Bruck, chairman.
8. Report of the Trustees of the California Medical Association—E. Vincent Askey, president.
9. Report of the Auditing Committee—Sidney J. Shipman, chairman.
10. Report of the Secretary—L. Henry Garland.
11. Report of the Executive Secretary—John Hunton.
12. Recess.—(At 8 o'clock the House of Delegates will recess. Elected and ex-officio members of the House will then convene under the chairmanship of the president of the Board of Trustees of California Physicians' Service, to function with Board of Administrative Members of California Physicians' Service. With the adjournment of the meeting of C.P.S. Administrative Members, the C.M.A. House of Delegates will convene, to act again as the House of Delegates of the California Medical Association.)

Meeting of Administrative Members of California Physicians' Service

1. Roll call.
2. Report of the President—Dr. Lowell S. Goin.
3. Report of the Secretary—Dr. Chester L. Cooley.
4. C.P.S. Administration Business Report, by the Executive Director—Mr. W. M. Bowman.
5. Appointment of Nominating Committee for Trustees and Administrative Members at Large.
6. Introduction of Resolutions.
7. Recess—for 24 hours. (Time of reconvening will be stated.)
8. Consideration of the Report of the Nominating Committee.
9. Consideration of resolutions.
10. New business.

Reconvening of House of Delegates

13. Report of the Editor—Dwight L. Wilbur.
14. Reports of District Councilors.
15. Reports of Councilors-at-Large.
16. Report of Legal Counsel—Peart, Baraty & Hassard.
17. Reports of Standing and Special Committees:

A. Standing Committees:

- (a) Executive Committee—Sidney J. Shipman.
- (b) Committee on Associated Societies and Technical Groups—Robert A. Scarborough.
- (c) Committee on Audits—Sidney J. Shipman.
- (d) Committee on Health and Public Instruction—Orrin Cook.
- (e) Committee on History and Obituaries—Morton R. Gibbons, Sr.
- (f) Committee on Hospitals, Dispensaries, and Clinics—Carroll B. Andrews.
- (g) Committee on Industrial Practice—Donald Cass.
- (h) Committee on Medical Defense—Nelson Howard.
- (i) Committee on Medical Economics—H. Gordon MacLean.
- (j) Committee on Medical Education and Medical Institutions—L. R. Chandler.
- (k) Committee on Organization and Membership—Carl L. Mulfinger.
- (l) Committee on Postgraduate Activities—John C. Ruddock.
- (m) Committee on Publications—George Dawson.

- (n) Committee on Public Policy and Legislation—Dwight H. Murray.
- (o) Committee on Scientific Work (Annual Session)—L. Henry Garland.
- (p) Cancer Commission—Lyell C. Kinney.
- (q) Editorial Board—Dwight L. Wilbur.

B. Special Committees:

- (a) Delegates to the American Medical Association—John W. Cline.
- (b) Physicians' Benevolence Committee—Axel E. Anderson.
- (c) Advisory Planning Committee—John Hunton.
- (d) Committee on Revision of Constitution and By-Laws—Sam J. McClendon.
- (e) Committee on Crippled Children's Act—Frederic Ewens.
- (f) Committee on Study of Alcoholism—Cullen W. Irish.
- (g) Blood Bank Commission—John Upton.
- (h) Committee on Industrial Health—Christopher Leggo.
- (i) Committee on Rural Medical Service—Carroll B. Andrews.

18. Old and Unfinished Business.

- (a) Constitutional Amendments.

19. New Business.

SECOND MEETING
Tuesday, May 10, at 4:30 p.m.

ORDER OF BUSINESS

1. Call to order.
2. Supplemental Report of Credentials Committee.
3. Roll call.
4. Secretary's announcement of Council's selection of place for the 1950 annual session.
5. Election of Officers:
 - (a) *President-Elect*.
 - (b) *Speaker*.
 - (c) *Vice-Speaker*.
 - (d) *District Councilors** (*three-year term*):
 - Third District—Harry E. Henderson, Santa Barbara (term expiring).
 - Third District—Inyo, Kern, Mono, San Luis Obispo, Santa Barbara and Ventura counties.
6. Announcement by Secretary.
Council's nominations of members of Standing Committees. (For approval by the House of Delegates.)
7. Reports of Reference Committees:
 - (a) Report of Reference Committee No. 1 on Reports of Officers, the Council, and Standing and Special Committees.
 - (b) Report of Reference Committee No. 2 on Reports of the Secretary-Treasurer and the Executive Secretary, on budget and dues.
 - (c) Report of Reference Committee No. 3 on Resolutions, Amendments to the Constitution and By-Laws and New and Miscellaneous Business.
 - (d) Report of Reference Committee No. 4 on business brought before the House of Delegates in Executive Session.
8. Unfinished Business.
9. New Business.
10. Presentation of Officers:
 - President*
 - President-Elect*
 - Speaker*
 - Vice-Speaker*
11. Presentation of Certificate to Retiring President—E. Vincent Askey.
12. Approval of Minutes. (Committee to edit.)
13. Adjournment.

LEWIS A. ALESEN, *Speaker*
L. HENRY GARLAND, *Secretary*

*Procedure of nomination of District Councilors is outlined in paragraph 3 of Article VII, Section 1, of C.M.A. constitution, adopted on May 8, 1940.

The nine district Councilors shall be elected as follows: Prior to the time set for election of district Councilors, the delegates of each Councilor district for which a councilorship is about to become vacant, shall submit in writing to the Secretary-Treasurer the names of one or more nominees to fill the said vacancy.

The Secretary-Treasurer shall transmit the names of such nominee or nominees so submitted to him to the House of Delegates on or before the time set for the election.

A vote shall be taken by the House of Delegates upon the nominee or nominees so submitted and, in the event that only one nominee has been submitted, the House of Delegates may, by a majority vote, either elect or refuse to elect said nominee.

If the House of Delegates shall reject the sole nominee of the delegates from the councilorship district concerned, then said delegates must immediately thereafter submit an additional nominee or nominees and the House shall proceed to vote thereon; if there is but one nominee, the House may elect or reject.

If, after such time as the Speaker may allow, delegates within such councilor district fail to submit an additional nominee or nominees, the House of Delegates may then proceed to make nominations from the floor of the House and a vote shall then be taken by the House of Delegates to determine who shall be elected to the vacant councilorship.

All nominees for district councilorships must be members in good standing, residing within the district in which the vacancy exists.

SCIENTIFIC ASSEMBLIES

General Meetings

FIRST GENERAL MEETING

SUNDAY, MAY 8

10:00 - Ballroom, Biltmore Hotel

10:00 - Address of Welcome—Benjamin M. Frees, M.D., President, Los Angeles County Medical Association.

10:05 - Greetings from the Woman's Auxiliary—Mrs. Lawrence K. Gundrum, President, Woman's Auxiliary to the California Medical Association.

10:10 - Address of the President—E. Vincent Askey, M.D., Los Angeles.

10:40 - Good Medical Care for the American People—L. Howard Schriver, M.D., Cincinnati, Ohio, by invitation.

11:10 - Nutritional Aspects of Anastomotic Operations—Chester M. Jones, M.D., Boston, Massachusetts, by invitation.

11:35 - Benign Diseases of the Breast—Nathan A. Womack, M.D., Iowa City, Iowa, by invitation.

12:00 - Nursing for the Future—Lulu K. Wolf, R.N., Los Angeles, by invitation.

SECOND GENERAL MEETING

TUESDAY, MAY 10

9:10 - Ballroom, Biltmore Hotel

Chairmen: George B. Robson, M.D., San Francisco
A. Morse Bowles, M.D., Santa Rosa

9:10 - Demonstration—Our Responsibility for the Earlier Diagnosis of Cancer—Leonard Dobson, M.D., San Francisco.

9:30 - Injuries to the Carpus—Kellogg Speed, M.D., Chicago, Illinois, by invitation.

9:55 - Some Phases of Postoperative Pulmonary Atelectasis—Anderson Hilding, M.D., Duluth, Minnesota, by invitation.

10:20 - The Management of Acute Myocardial Infarction—George E. Burch, M.D., New Orleans, Louisiana, by invitation.

10:45 - Question and Answer Period.

Clinical-Pathological Conference

11:00 - Case No. 1—Pathologist Owen F. Thomas, M.D., Santa Rosa. Clinician Charles A. Noble, M.D., San Francisco. Surgeon Nathan A. Womack, M.D., Iowa City, Iowa, by invitation.

11:45 - Case No. 2—Pathologist John Budd, M.D., Los Angeles. Clinician Chester M. Jones, M.D., Boston, Massachusetts, by invitation. Surgeon Nathan A. Womack, M.D., Iowa City, Iowa, by invitation.

THIRD GENERAL MEETING

WEDNESDAY, MAY 11

9:30 - Ballroom, Biltmore Hotel

What's New in Medicine

Chairman: E. Vincent Askey, M.D., President

9:30 - What's New In Gynecology—James C. Doyle, M.D., Beverly Hills.

9:50 - What's New In Aureomycin and Other Antibiotics—Henry Brainerd, M.D., San Francisco.

10:10 - What's New In Abdominal Surgery—Nathan A. Womack, M.D., Iowa City, Iowa, by invitation.

10:30 - What's New In Cardiology—George E. Burch, M.D., New Orleans, Louisiana, by invitation.

10:50 - What's New In Gastroenterology—Chester M. Jones, M.D., Boston, Massachusetts, by invitation.

11:10 - What's New In Otolaryngology—Anderson Hilding, M.D., Duluth, Minnesota, by invitation.

11:30 - What's New In Orthopedics—Kellogg Speed, M.D., Chicago, Illinois, by invitation.

11:50 - What's New In British Medicine—Mr. Wm. A. Richardson, Editor, Rutherford, New Jersey, by invitation.

Questions in writing to the Speakers: These will be discussed after each presentation.

Section Meetings

GENERAL MEDICINE

George B. Robson, M.D., San Francisco, *Chairman*

Lewis T. Bullock, M.D., Los Angeles, *Secretary*

DeWitt Burnham, M.D., San Francisco, *Assistant Secretary*



GEORGE B. ROBSON
Chairman, General Medicine



LEWIS T. BULLOCK
Secretary, General Medicine

SUNDAY, MAY 8

1:30 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Practice
and Allergy

1:30 - Demonstration—Electrocardiographic Clinical Pathological Demonstration—Electrocardiograms illustrating common patterns will be discussed as unknowns followed by brief presentation of clinical and pathological findings.—Francis L. Chamberlain, M.D., William Paul Thompson, M.D., Morris Lipson, M.D., and William H. Thomas, M.D.

Panel Discussion

2:00 - Hypersensitivity Diseases

Moderator: Lowell A. Rantz, M.D., San Francisco

The program will be conducted as a panel. The members will give short talks following which they will participate in a general discussion of the whole problem of hypersensitivity. Opportunity will be given for questions from the audience.

Immunological and Experimental Aspects of Hypersensitivity Disease—Frederick Moore, M.D., Los Angeles, by invitation.

Histamine and Antihistamine Drugs—Edmund L. Keeney, M.D., San Diego.

Loeffler's Syndrome—George Piness, M.D., Los Angeles.

Peripheral Vascular Manifestations of Hypersensitivity—George E. Burch, M.D., New Orleans, Louisiana, by invitation.

Gastro-intestinal Allergy—Chester M. Jones, M.D., Boston, Massachusetts, by invitation.

MONDAY, MAY 9

9:00 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Surgery,
General Practice and Radiology

Symposium

Diseases of the Gastro-intestinal Tract

Chester M. Jones, M.D., Moderator

Nathan A. Womack, M.D., Surgical Consultant
Thomas N. Foster, M.D., Radiological Consultant

The Gastro-intestinal system will be covered in a general way by the experts with highlights on newer thoughts and with specific 15 minute papers.

9:00 - Demonstration—Benign Tumors of the Gastro-intestinal Tract: Radiological Demonstration.

9:30 - Introductory Remarks to Symposium.

9:45 - The Problem of the Acquired Short Esophagus—H. Brodie Stephens, M.D., San Francisco.

Discussion.

10:15 - Result of Five Years' Treatment of Peptic Ulcer and Ulcerative Colitis with Enterogastrone and Hog Duodenum—Lester M. Morrison, Los Angeles.

Discussion.

10:45 - Acute Pancreatitis—John Paxton, Los Angeles.

11:00 - Chronic Relapsing Pancreatitis—Dwight L. Wilbur, M.D., San Francisco.

Discussion.

11:30 - Strangulation Obstruction of the Small Intestine—Harold P. Totten, M.D., Los Angeles.

Discussion.

12:00 - Pain in the Right Lower Quadrant Due to Malrotation and Malfixation of the Right Colon—Edmund Butler, San Francisco.

Discussion.

TUESDAY, MAY 10

1:30 - Ballroom, Biltmore Hotel

1:30 - Demonstration—The Kidney in Health—A Motion Picture.

2:00 - Business Meeting of Medical Section.

2:05 - Practical Aspects of Water Metabolism—George E. Burch, M.D., New Orleans, Louisiana, by invitation.

2:35 - Clinical Potassium Problems—Helen Martin, M.D., Los Angeles.

2:55 - Manifestations of Magnesium Metabolism—Hugh Edmondson, M.D., Los Angeles.

3:10 - Discussion.

3:25 - Recess.

3:30 - Fundamental Facts of Fat Metabolism—Harry J. Deuel, Jr., Ph.D., Los Angeles, by invitation.

3:50 - Metabolic Effect of Vitamin B₁₂ in Pernicious Anemia—Stacy R. Mettier, M.D., Russell Tat, M.D., San Francisco, and Alice McBride, A.B., San Francisco, by invitation.

Discussion.

4:15 - Definition of an Internist—Verne R. Mason, M.D., Beverly Hills.

4:35 - Recess—Meeting of the California Society of Internal Medicine.

WEDNESDAY, MAY 11

1:00 - Ballroom, Biltmore Hotel

Symposium

Heart Disorders*

1:00 - Demonstration—The Nature of the Auricular Flutter and Fibrillation—A Motion Picture—Myron Prinzmetal, M.D., Los Angeles, et al.

2:00 - The Role of the Kidney in the Excretion of Digitoxin—Rene Bine, M.D., Meyer Friedman, M.D., San Francisco, and Sanford O. Byers, Ph.D., San Francisco, by invitation.

2:25 - A Review of the Results of Massive Penicillin Therapy in Seventy Cases of Subacute Bacterial Endocarditis—George C. Griffith, M.D., Pasadena, and David C. Levinson, M.D., Los Angeles, by invitation.

2:50 - Studies with Mercurhydrin Tagged with Radioactive Mercury—George E. Burch, M.D., New Orleans, Louisiana, by invitation.

3:20 - New Drugs in Cardiac Arrhythmias—Morris H. Nathanson, M.D., Los Angeles.

3:45 - Experience with Vitamin "E" in Coronary Disease—Homer P. Rush, M.D., Portland, Oregon, by invitation.

4:10 - Newer Methods for the Evaluation of Patients for Lumbar Sympathectomy—Travis Winsor, M.D., Los Angeles.

4:35 - Recess—Business Meeting and Election of Officers of the California Heart Association.

*This program has been arranged jointly by the Section on General Medicine and the Medical Division of the California Heart Association.



GENERAL SURGERY

A. Morse Bowles, M.D., Santa Rosa, *Chairman*
 Conrad J. Baumgartner, M.D., Los Angeles, *Secretary*
 Frank Gerbode, M.D., San Francisco, *Assistant Secretary*



A. MORSE BOWLES
 Chairman, General Surgery



CONRAD J. BAUMGARTNER
 Secretary, General Surgery

SUNDAY, MAY 8

2:00 - Biltmore Bowl

2:00 - Chairman's Address: The Present Attitude Toward Gallbladder Surgery—A. Morse Bowles, M.D., Santa Rosa.

Discussion.

2:20 - Benign Lesions of the Colon—Ralph V. Byrne, M.D., Los Angeles.

Discussion.

2:40 - Surgical Management of the Injured Large Bowel—Samuel Gendel, M.D., Anaheim.

Discussion.

3:00 - A Clinico-Anatomical Study of Volvulus of the Colon and Ascending Colon—Harold L. Lindner, M.D., San Francisco.

Discussion.

3:20 - Complete Multiple Polyposis of the Colon—Theodore C. Lawson, M.D., Oakland.

Discussion.

3:40 - Volvulus of the Sigmoid Colon—Walter L. Byers, M.D., Oakland.

Discussion.

4:00 - Use of Low Transverse Incision in Resection of the Rectum with End-to-End Anastomosis. L. S. Cherney, M.D., San Francisco.

Discussion.

4:20 - Complications of Colostomy—Walter Birnbaum, M.D., San Francisco.

Discussion.

MONDAY, MAY 9

9:30 - Ballroom, Biltmore Hotel

Joint Meeting with General Medicine, General Practice, and Radiology

For Program, see Section on General Medicine.

TUESDAY, MAY 10

2:00 - Biltmore Theater

2:00 - Intraoperative Cancer—E. J. Joergenson, M.D., Glendale, Samuel Perzik, M.D., and Paul H. Deeb, M.D., Los Angeles.

Discussion.

2:20 - The Nature and Relief of the Symptoms of Cholecystitis—Nathan A. Womack, M.D., Iowa City, Iowa, by invitation.

Discussion.

2:40 - Choledochogastrostomy with Gastric Mucosal Tube in the Repair of Certain Strictures of the Bile Ducts—Carl L. Hoag, M.D., Leon Goldman, M.D., H. Glenn Bell, M.D., San Francisco, and Frederick Binkley, M.D., San Francisco, by invitation.

Discussion.

3:00 - Business Meeting.

3:10 - Acute Cholecystitis in the Aged Patient—Harry A. Davis, M.D., R. N. Brown, M.D., by invitation, and W. A. Scharffenberg, M.D., by invitation, Los Angeles.

Discussion.

3:30 - Cholangiography Following Common Duct Drainage—Clarence E. Rees, M.D., San Diego.

Discussion.

3:50 - **The Relation of the Incidence of Local Skin Recurrences Following Radical Mastectomy to the Area of Skin Excised**—E. William Rector, M.D., Sacramento.

Discussion.

4:10 - **Benign Cysts of the Pancreas Simulating Neoplasm**—Carleton Mathewson, Jr., M.D., San Francisco.

Discussion.

4:30 - **The Surgical Significance of the Non-Visualizing Gallbladder**—R. Bruce Henley, M.D., and Edwin G. Clausen, M.D., Oakland.

Discussion.

WEDNESDAY, MAY 11

2:00 - Chapel, Baptist Church, Philharmonic Building

2:00 - **The Treatment of Carcinoma of the Stomach by Total Gastrectomy**—James H. Saint, M.D., Santa Barbara.

Discussion.

2:20 - **Carcinoma of the Esophagus and Gastric Cardia with Special Reference to Treatment**.—Harold L. Thompson, M.D., Los Angeles.

Discussion.

2:40 - **Cardiospasm and Megaeosophagus**—Gunther W. Nagel, M.D., San Francisco.

Discussion.

3:00 - **The Syndrome of Proximal Jejunal Loop Obstruction Following Gastric Resection**—William F. Quinn, M.D., and J. H. Gifford, M.D., Los Angeles.

Discussion.

3:20 - **Treatment of Cryptorchidism**—William H. Snyder, M.D., Los Angeles.

Discussion.

3:40 - **The Problem of Adequate Therapy for Varicose Veins—A New Operative Procedure**—Theodore B. Massell, M.D., Van Nuys.

Discussion.

4:00 - **A Critique of Modern Methods of Hernia Repair with Special Reference to Cooper's Ligament**—Jack M. Farris, M.D., Los Angeles.

Discussion.

4:20 - **Tantalum Mesh in Operations for Recurrent and Direct Inguinal Hernia**—Marcus H. Rabwin, M.D., and David H. Rosenblum, M.D., Los Angeles.



GENERAL PRACTICE

L. F. Whittaker, M.D., Huntington Beach, *Chairman*
 James E. Reeves, M.D., San Diego, *Secretary*
 E. R. Wilson, M.D., Red Bluff, *Assistant Secretary*



L. F. WHITTAKER
 Chairman, General Practice



JAMES E. REEVES
 Secretary, General Practice

SUNDAY, MAY 8

2:00 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Medicine
 and Allergy

For Program, see Section on General Medicine

MONDAY, MAY 9

9:30 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Surgery,
 General Medicine and Radiology

For Program, see Section on General Medicine

MONDAY, MAY 9

2:00 - Baptist Church, Philharmonic Building

Joint Meeting with Sections on Pediatrics and
 Public Health

For Program, see Section on Pediatrics

TUESDAY, MAY 10

2:00 - Chapel, Baptist Church, Philharmonic
 Building

2:00 - Pediatric Emergencies—Edwin F. Patton,
 M.D., Beverly Hills.

Discussion and Questions from the Floor.

2:25 - Surgical Emergencies—Felix Rossi, M.D.,
 Fairfield.

Discussion and Questions from the Floor.

2:50 - Medical Emergencies—Willis P. Baker, M.D.,
 Santa Ana.

Discussion and Questions from the Floor.

3:15 - Obstetrical Emergencies—William B. McGee,
 M.D., San Diego.

Discussion and Questions from the Floor.

3:40 - Recess—Annual Meeting of California Academy of General Practice.

ALLERGY

George Piness, M.D., Los Angeles, *Chairman*
Albert H. Rowe, M.D., Oakland, *Vice-Chairman*
Frank G. Crandall, Jr., M.D., *Secretary*



GEORGE PINESS
Chairman, Allergy



FRANK G. CRANDALL, JR.
Secretary, Allergy

SUNDAY, MAY 8

2:00 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Medicine
and General Practice

For program, see Section on General Medicine.

MONDAY, MAY 9

2:00 - Conference Room 5, Biltmore Hotel

2:00 - The Diagnostic Problem in Allergy—J. Harvey Black, M.D., Dallas, Texas, by invitation.

2:40 - Allergic Parotitis—Ralph Bookman, M.D., Los Angeles.

2:55 - The Non-Allergic Wheeze—Alfred Goldman, M.D., Beverly Hills.

3:10 - The Emotions and Bronchial Asthma—Hyman Miller, M.D., Beverly Hills.

3:25 - Current Methods of Administering Aminophyllin and Description of Two New Methods—Milton Hartman, M.D., San Francisco.

3:40 - Bronchial Asthma in Adults Between Ages of 15 and 55—Albert H. Rowe, M.D., and Albert Rowe, Jr., M.D., Oakland.

3:55 - Aspects of Bronchial Asthma Not Usually Recognized—Willard S. Small, M.D., Pasadena.

4:10 - Eczema in the Adult Patient—Gardner S. Stout, M.D., San Francisco.

ANESTHESIOLOGY

William B. Neff, M.D., San Francisco, *Chairman*
 Francis E. Guinney, M.D., Los Angeles, *Secretary*



WILLIAM B. NEFF
 Chairman, Anesthesiology



FRANCIS E. GUINNEY
 Secretary, Anesthesiology

SUNDAY, MAY 8

2:00 — Conference Room 5, Biltmore Hotel

2:00 — Chairman's Address: The Paradoxical Spread of Anesthesiology in California—William B. Neff, M.D., San Francisco.

2:30 — Management of Anesthesia for Congenital Heart Operations in Children—Alvin J. Harris, M.D., San Francisco.

Discussion opened by Dirk Stegeman, M.D., Los Angeles.

3:00 — Physiology of Spinal Anesthesia—Joseph T. Trotter, M.D., San Diego.

Discussion opened by Arthur J. Martinson, M.D., Los Angeles.

3:30 — An Evaluation of Intrathecal Ephedrine—Bruce M. Anderson, M.D., Oakland.

Discussion opened by Douglass H. Batten, M.D., San Diego.

4:00 — Spinal Anesthesia with Pontocaine, Glucose and Adrenalin—Joseph H. Failing, M.D., Los Angeles.

Discussion opened by Charles C. Wycoff, M.D., San Francisco.

TUESDAY, MAY 10

2:00 — Conference Room 5, Biltmore Hotel

2:00 — Granuloma Following Intratracheal Anesthesia—Simon Jesberg, M.D., Los Angeles.

Discussion opened by John Wm. Shuman, Jr., M.D., Los Angeles.

2:30 — Anesthesia Complications During Surgery—Sim Galinson, M.D., Los Angeles.

Discussion opened by Charles A. Foulks, Jr., M.D., Long Beach.

3:00 — Business Meeting.

3:30 — Laryngospasm—Earl T. Hull, Jr., M.D., Los Angeles.

Discussion opened by William H. Moran, M.D., Los Angeles.

4:00 — Review of Operating Room Deaths—John B. Dillon, M.D., Los Angeles.

Discussion.

DERMATOLOGY AND SYPHILOLOGY

Herman V. Allington, M.D., Oakland, *Chairman*
 Walter R. Nickel, M.D., San Diego, *Vice-Chairman*
 Ervin Epstein, M.D., Oakland, *Secretary*
 J. Walter Wilson, M.D., Los Angeles, *Assistant Secretary*



HERMAN V. ALLINGTON
 Chairman
 Dermatology and Syphilology



ERVIN EPSTEIN
 Secretary
 Dermatology and Syphilology

MONDAY, MAY 9

2:00 — Conference Room 1, Biltmore Hotel

Symposium

Progress in Dermatology

- 2:00 — Reiter's Disease—Louis H. Winer, M.D., Beverly Hills.
- 2:08 — Use of Newer Antibiotics in Skin Diseases—Fred G. Novy, Jr., M.D., Oakland.
- 2:16 — Atomic Bomb Injuries to the Skin—Verne R. Mason, M.D., Beverly Hills.
- 2:24 — Radioactive Isotopes in Dermatology—John Bertrand, M.D., Berkeley, by invitation.
- 2:32 — Radon in Skin Lesions—Bertram V. A. LowBeer, M.D., San Francisco.
- 2:40 — Nitrogen Mustards in Dermatology—Norman N. Epstein, M.D., San Francisco.
- 2:48 — Proprietary Remedies and Cosmetics—Ralph W. Weilerstein, M.D., Federal Food and Drug Administration, San Francisco, by invitation.
- 2:56 — Newer Insecticides and Scabicides—C. J. Lunsford, M.D., Oakland.
- 3:04 — Paravertebral Injections in Herpes Zoster—Frank Anderson, M.D., Los Angeles.
- 3:12 — Vitamin D₃ in Dermatology—Merlin T. R. Maynard, M.D., San Jose.
- 3:20 — Modern Aspects of Nutrition in Dermatology—Samuel Ayres, Jr., M.D., Los Angeles.

3:28 — Antihistaminic Agents, Their Value in Dermatology—Paul D. Foster, M.D., Los Angeles.

3:36 — Newer Bases and Wetting Agents—Werner Duemling, M.D., San Diego.

3:44 — The Touch Smear Technique as an Aid in Pathologic Diagnosis—George T. Wilson, M.D., Palo Alto, by invitation.

TUESDAY, MAY 10

9:15 — Conference Room 1, Biltmore Hotel

Symposium

Dermatologic Surgery

- 9:15 — Correction of Advanced Rhinophyma by Means of Reconstructive Plastic Surgery—Motion Pictures in Color—Arthur E. Smith, M.D., D.D.S., Los Angeles.
- 9:45 — Chemosurgery in Cutaneous Malignancies—Frederic E. Mohs, M.D., Madison, Wisconsin, by invitation.
- 10:25 — Cold Steel Surgery in Dermatologic Lesions—H. Glenn Bell, M.D., San Francisco.
- 10:45 — The Relationship of Plastic Surgery to Dermatologic Practice—William S. Kiskadden, M.D., Los Angeles.
- 11:05 — Electrosurgery in Dermatology—Harry J. Templeton, M.D., Oakland.
- 11:20 — Actual Cautery Surgery in Dermatology—H. P. Jacobson, M.D., and David N. Alcon, M.D., Los Angeles.

WEDNESDAY, MAY 11

9:15 — Conference Room 1, Biltmore Hotel

9:15 — Pinta, A Syphilitic Disease—Paul Fasal, M.D., San Francisco.

9:30 — Chairman's Address: Use of Liquid Nitrogen in Dermatology—Herman V. Allington, M.D., Oakland.

9:50 — Nail Changes Due to Nail Polish Undercoats. Herman Sharlit, M.D., New York City, by invitation.

Discussion: Ben A. Newman, M.D., Los Angeles.

10:20 — Hypertensive Ischemic Ulcers of the Legs—Eugene Farber, M.D., San Francisco.

Discussion: Norman E. Freeman, M.D., San Francisco.

10:45 — Relapsing Febrile Nodular Nonsuppurative Panniculitis (Weber-Christian Disease) — Molleurus Couperus, M.D., Los Angeles.

Discussion: Nelson Paul Anderson, M.D., Los Angeles.

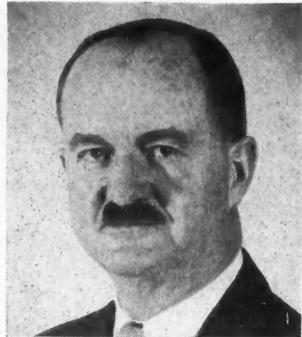
11:10 — Business Meeting and Election of Officers.

EYE, EAR, NOSE AND THROAT

George L. Kilgore, M.D., San Diego, *Chairman*
 George F. Keiper, Jr., M.D., Visalia, *Vice-Chairman*
 Russell Fletcher, M.D., Berkeley, *Secretary*



GEORGE L. KILGORE
 Chairman
 Eye, Ear, Nose and Throat



RUSSELL FLETCHER
 Secretary
 Eye, Ear, Nose and Throat

MONDAY, MAY 9

9:30 — Chapel, Baptist Church, Philharmonic Building

9:30 — The Common Neurological Lesions in Eye, Ear, Nose and Throat Practice—Delbert Warden, M.D., San Diego.

Discussion.

10:00 — Operative Treatment of Superior Oblique Paresis—Walter L. Roberts, M.D., Los Angeles.

Discussion.

10:30 — Tumors of the Conjunctiva and Limbus—A. Ray Irvine, M.D., Los Angeles.

Discussion.

11:00 — The Preparation and Sterilization of Ophthalmic Solutions—Michael Hogan, M.D., San Francisco.

Discussion.

11:30 — A Syndrome of Stationary Localized Detached Retina—S. Rodman Irvine, M.D., Los Angeles.

Discussion.

10:00 — Physiology and Surgery of the Nose—Anderson Hilding, M.D., Duluth, Minnesota, by invitation.

10:40 — Recent Concepts of Retarded Speech Development—Paul Moses, M.D., San Francisco.

Discussion.

11:10 — Otolaryngological Considerations of Infectious Mononucleosis—Leroy J. Barnes, M.D., Inglewood.

Discussion.

WEDNESDAY, MAY 11

2:00 — Baptist Church, Philharmonic Building

Joint Meeting with Section on Obstetrics and Gynecology, Pediatrics, and Public Health

2:00 — Tracheotomy in Acute Bulbar Poliomyelitis—Alden Miller, M.D., Los Angeles.

Discussion.

2:30 — Lung Expansion in the Newborn—Anderson Hilding, M.D., Duluth, Minnesota, by invitation.

3:00 — Intermission.

3:10 — Tonsillectomy in the Allergic Child—Benjamin F. Feingold, M.D., Los Angeles.

Discussion.

3:40 — Treatment of Otitis Media—Max E. Pohlman, M.D., Pasadena.

Discussion.

WEDNESDAY, MAY 11

9:30 — Chapel, Baptist Church, Philharmonic Building

9:30 — The Management of Nasal Fractures—Gilbert Roberts, M.D., Pomona.

Discussion.

INDUSTRIAL MEDICINE AND SURGERY

Joseph D. Peluso, M.D., Los Angeles, *Chairman*
 Nelson J. Howard, M.D., San Francisco, *Vice-Chairman*
 Robert K. Gustafson, M.D., Pasadena, *Secretary*



JOSEPH D. PELUSO
 Chairman
 Industrial Medicine and Surgery



ROBERT K. GUSTAFSON
 Secretary
 Industrial Medicine and Surgery

SUNDAY, MAY 8

2:00 — Music Room, Biltmore Hotel

2:00 — Proliferative Response of Joints to Trauma—James Vernon Luck, M.D., Los Angeles.
 Discussion by Ralph Soto-Hall, M.D., San Francisco, and Francis M. McKeever, M.D., Los Angeles.

2:30 — Recent Advances in the Treatment of Diabetic Gangrene—A Motion Picture—Walter Scott, M.D., Hollywood.
 Discussion by Kendrick Smith, M.D., Los Angeles, and Nelson Howard, M.D., San Francisco.

3:00 — Arthrotomy of the Spine—Paul E. McMaster, M.D., Los Angeles.
 Discussion by Frederick C. Bost, M.D., San Francisco, and John J. Loutzenheiser, M.D., San Francisco.

3:30 — Fractures of the Vertebrae—Kellogg Speed, M.D., Chicago, Illinois, by invitation.
 Discussion by John C. Wilson, M.D., Los Angeles.

4:00 — Recent Advances in the Treatment of Rheumatoid Arthritis—Richard D. Miller, M.D., Pasadena.
 Discussion by Roland A. Davison, M.D., San Francisco, and Pierre J. Walker, M.D., Los Angeles.

4:30 — Transcervical and Intertrochanteric Fractures of the Femur—Daniel H. Levinthal, M.D., Beverly Hills.
 Discussion by Vernon P. Thompson, M.D., Los Angeles, and Alonzo J. Neufeld, M.D., Los Angeles.

TUESDAY, MAY 10

2:00 — Conference Room 8, Biltmore Hotel

2:00 — The Use of Bone Grafts in the Treatment of Fresh Fractures of Both Bones of the Forearm—John K. Coker, M.D., Bakersfield.
 Discussion by Alvia Brockway, M.D., Los Angeles, and Richard B. McGovney, Santa Barbara.

2:30 — Report of the Committee for Standardization of Joint Measurements in Industrial Injury Cases—Packard Thurber, Jr., M.D., Los Angeles.
 Discussion by L. I. Newman, M.D., San Francisco, and Donald Cass, M.D., Los Angeles.

3:00 — Ruptured Intervertebral Discs of the Cervical Spine—C. Hunter Shelden, M.D., San Marino.
 Discussion by David L. Reeves, M.D., Santa Barbara, and Edwin B. Boldrey, M.D., San Francisco.

3:30 — Fracture of the Calcaneus—Kellogg Speed, M.D., Chicago, Illinois, by invitation.
 Discussion by Joseph D. Peluso, M.D., Los Angeles.

4:00 — The Repair of Old Injuries of the Anterior Crucial Ligament of the Knee—John R. Vasko, M.D., Oakland.
 Discussion by Harold E. Crowe, M.D., Los Angeles, and Leonard B. Barnard, M.D., Oakland.

4:30 — Business Meeting.

NEUROPSYCHIATRY

Cullen Ward Irish, M.D., Los Angeles, *Chairman*
 Henry W. Newman, M.D., San Francisco, *Secretary*



CULLEN W. IRISH
 Chairman, Neuropsychiatry



HENRY W. NEWMAN
 Secretary, Neuropsychiatry

SUNDAY, MAY 8

2:00 — Conference Room 4, Biltmore Hotel

2:00 — Chairman's Address: *Alcoholism: The Role of Psychiatry in Meeting the Problem*—Cullen Ward Irish, M.D., Los Angeles.

Discussion.

2:30 — *Psychosomatic or Somatopsychic?*—Arthur R. Timme, M.D., Los Angeles.

Discussion by J. M. Nielsen, M.D., Los Angeles, and Herbert I. Kupper, M.D., Beverly Hills.

3:00 — *Relationship Between Practicing Psychiatrist and Psychiatric Social Worker*—George N. Thompson, Jr., M.D., and Miss Juanita Kirkham, by invitation, Van Nuys.

Discussion by J. M. Nielsen, M.D., and Brunon Bielinski, M.D., Los Angeles.

3:30 — *Interdependent Superiority and Inferiority Feelings*—Harrington V. Ingham, M.D., Los Angeles.

Discussion by Theodore Rothman, M.D., Los Angeles, and Ralph R. Greenson, M.D., Beverly Hills.

4:00 — *A Case of Transvestitism in a Nominally Non-Homosexual Epileptic*—Robert B. Sampliner, M.D., and Seymour J. Fastron, M.D., Los Angeles.

Discussion by J. M. Nielsen, M.D., Los Angeles, and Nicholas A. Bercl, M.D., Beverly Hills.

MONDAY, MAY 9

9:30 — Conference Room 4, Biltmore Hotel

9:30 — Business Meeting, Election of Section Officers.

9:40 — *Encephalitic Syndrome Consequent to Multiple Miliary Embolisms of the Brain*—Edison D. Fisher, M.D., Los Angeles.

Discussion by Clarence W. Olsen, M.D., Beverly Hills, and Walter F. Schaller, M.D., San Francisco.

10:10 — *The Neurological Program of the Veterans Administration*—Walter F. Schaller, M.D., San Francisco.

Discussion by J. M. Nielsen, M.D., Los Angeles, and H. H. DeJong, M.D., Van Nuys.

10:40 — *Procaine Hydrochloride as an Excitatory and Integrative Agent in Psychiatry*—Clarence W. Olsen, M.D., Beverly Hills, and William G. Winsor, III, M.D., Los Angeles, by invitation.

Discussion by Clinton Thienes, M.D., and Karl O. von Hagen, M.D., Los Angeles.

11:10 — *Fetal Anoxia and Epilepsy*—Frederick A. Fender, M.D., San Francisco.

Discussion by J. M. Nielsen, M.D., and Cyril B. Courville, M.D., Los Angeles.

11:40 — *The Treatment of Typical Migraine with Dehydrated Ergot Derivatives*—Nicholas A. Bercl, M.D., Beverly Hills.

Discussion by John D. Moriarity, M.D., Los Angeles, and Robert B. Aird, M.D., San Francisco.

OBSTETRICS AND GYNECOLOGY

A. M. McCausland, M.D., Los Angeles, *Chairman*
 Donald A. Dallas, M.D., San Francisco, *Vice-Chairman*
 Leon Krohn, M.D., Los Angeles, *Secretary*



A. M. McCausland
 Chairman
 Obstetrics and Gynecology



LEON KROHN
 Secretary
 Obstetrics and Gynecology

SUNDAY, MAY 8

2:00 - Conference Room 1, Biltmore Hotel

Symposium

"Rooming-in" Plan for Mothers and Infants

Moderator: Philip A. Reynolds, M.D., Los Angeles

2:00 - Obstetrician's Point of View—Philip A. Reynolds, M.D., Los Angeles.
 Discussion.

2:20 - Pediatrician's Point of View—Robert G. Shirley, M.D., Beverly Hills.
 Discussion.

2:40 - Nursing Point of View—Margaret McGuirk, R.N., North Hollywood, by invitation.
 Discussion.

3:00 - Psychiatrist's Point of View—Norman A. Levy, M.D., Los Angeles.
 Discussion.

MONDAY, MAY 9

9:30 - Conference Room 1, Biltmore Hotel

Symposium

Medicolegal Aspects of Obstetrical and Gynecological Problems

Chairman: A. M. McCausland, M.D., Los Angeles

9:30 - Sterilization—Emil J. Krahulik, M.D., Los Angeles.

9:45 - Adoptions—Donald G. Tollefson, M.D., Los Angeles.

10:00 - Abortions—Karl L. Schaupp, Sr., M.D., San Francisco.

10:15 - Artificial Insemination—John O. Haman, M.D., San Francisco.

10:30 - Summary—Legal Aspects—Louis J. Regan, M.D., LL.B., Los Angeles.

10:45 - Discussion—To be opened by William Benbow Thompson, M.D., Los Angeles.

TUESDAY, MAY 10

2:00 - Conference Room 1, Biltmore Hotel

2:00 - Business Session.

2:20 - Chairman's Address: The Effect of Cord and Placental Blood on the Infant—A. M. McCausland, M.D., Los Angeles.

2:40 - The Usefulness of the Vaginal Smear—Milton Rosenthal, M.D., San Francisco, by invitation.

Discussion—Virgil O. Parrett, M.D., Napa.

3:05 - Endometriosis—Woodburn K. Lamb, M.D., Berkeley.

Discussion—Henry N. Shaw, M.D., Los Angeles.

3:30 - The Physiology and Management of the Climacteric—Gertrude F. Jones, M.D., San Francisco.

Discussion—John C. McDermott, M.D., Los Angeles.

WEDNESDAY, MAY 11

2:00 - Baptist Church, Philharmonic Building

Joint Meeting with Sections on Eye, Ear, Nose and Throat, Pediatrics and Public Health

For Program, see Section on Eye, Ear, Nose and Throat

PATHOLOGY AND BACTERIOLOGY

Gerson R. Biskind, M.D., San Francisco, *Chairman*
 C. S. Small, M.D., Loma Linda, *Secretary*
 Warren Bostick, M.D., San Francisco, *Assistant Secretary*



GERSON R. BISKIND
Chairman
 Pathology and Bacteriology



C. S. SMALL
Secretary
 Pathology and Bacteriology

SUNDAY, MAY 8

2:00 — Conference Room 8, Biltmore Hotel

2:00 — **Iodized-Poppy-Seed-Oil Granuloma**—Harry C. Fortner, M.D., Sherman Oaks.

Discussion opened by Emil Bogen, M.D., Olive View.

2:25 — **Fat Embolism Following Arthroclasia**—Howard J. Gomes, M.D., Los Angeles, by invitation.

Discussion opened by Albert F. Brown, M.D., Glendale.

2:50 — **Epithelial Tumors of the Bronchi**—Irving Reingold, M.D., by invitation, Richard E. Ottoman, M.D., by invitation, and R. E. Konwaler, M.D., by invitation, Van Nuys.

Discussion opened by Perry J. Melnick, M.D., Van Nuys.

3:15 — **The Pathologist and Pathology in the Cancer Program**—William O. Russell, M.D., Houston, Texas, by invitation.

Discussion by David Wood, M.D., San Francisco, and Alvin Foord, M.D., Pasadena.

3:40 — **Recess**—Annual Meeting of California Society of Pathologists.

MONDAY, MAY 9

9:30 — Conference Room 8, Biltmore Hotel

9:30 — **Acute Filarial Lymphangitis—A Review and Summary**—Robert W. Huntington, Jr., M.D., Los Angeles.

Discussion opened by Gilbert Curtis, M.D., Glendale.

9:55 — **The Pathology of Ochronosis**—Leo J. Kaplan, M.D., Sawtelle, by invitation.

Discussion opened by Gerson Biskind, M.D., San Francisco.

10:20 — **The Aortic Hypoplasia**—Bartlett C. Shackson, M.D., Long Beach.

Discussion.

10:45 — **Thrombosis of Renal Veins**—Albert E. Hirst, M.D., and Hugh A. Edmondson, M.D., Los Angeles.

Discussion opened by Arthur Lack, M.D., Van Nuys.

11:10 — **The Pathogenesis of Platelet Thrombosis**—Nathan B. Friedman, M.D., Los Angeles.

Discussion opened by Gurth Carpenter, M.D., Beverly Hills.

MONDAY, MAY 9

2:00 — Conference Room 8, Biltmore Hotel

2:00 — **Morphologic Changes in Mammary Cancer Following Hormone Therapy**—Ian Macdonald, M.D., Los Angeles.

Discussion.

2:30 — **Clinical and Pathologic Features of Endometriosis—A Study of 100 Cases**—D. A. De Santo, M.D., San Diego.

Discussion.

3:00 — **Chairman's Address: The Clinical Significance of Urinary Ketosteroid Assays**—Gerson R. Biskind, M.D., San Francisco.

3:30 — **Business Meeting and Election of Officers**.

PEDIATRICS

Alice Potter, M.D., San Francisco, *Chairman*
 Carl A. Erickson, M.D., Pasadena, *Secretary*
 Richard D. Cutter, M.D., Palo Alto, *Assistant Secretary*



ALICE POTTER
 Chairman, Pediatrics



CARL A. ERICKSON
 Secretary, Pediatrics

MONDAY, MAY 9

2:00 — Baptist Church, Philharmonic Building

Joint Meeting with Sections on General Practice and Public Health

Panel Discussion**What's New in Pediatrics**

Moderator: Robert S. Cleland, M.D., San Marino

2:00 — Treatment of Erythroblastosis—Clement Molony, M.D., Beverly Hills.

2:10 — Laboratory Determination and Clinical Significance of Various Rh Types of Antibodies—Gilbert Jorgensen, M.D., Los Angeles.

2:20 — Paroxysmal Tachycardia in Infancy—Eugene Levine, M.D., Los Angeles.

2:30 — Rheumatic Fever—Robert Shirley, M.D., Beverly Hills.

2:40 — Congenital Heart Disease—Charles Baker, M.D., Los Angeles, by invitation.

2:50 — Contagious Diseases—Evelynne Knouf, M.D., Pasadena.

3:00 — Recess.

3:20 — Treatment of Leukemia—Edward Evans, M.D., Pasadena, by invitation.

3:30 — Immunization—Milo Brooks, M.D., Los Angeles.

3:40 — Q Fever—Deron Hovsepian, M.D., Pasadena, by invitation.

3:50 — B.C.G.—Jacob Yerushalmi, Ph.D., Berkeley, by invitation, and Carroll E. Palmer, M.D., Washington, D.C., by invitation.

4:00 — Questions in writing to be passed to Moderator, who will distribute to members of the Panel.

TUESDAY, MAY 10

2:00 — Baptist Church, Philharmonic Building

2:00 — Indications for, and Results of Lobectomies in Children—John C. Jones, M.D., Los Angeles.

Discussion—Don Shelby, M.D., Los Angeles.

2:30 — Treatment of Miliary and Meningeal Tuberculosis in Infants and Children—Thomas L. Perry, M.D., Los Angeles, by invitation.

Discussion—Wendel Redfern, M.D., Glendale.

3:00 — Recess.

3:10 — Anoxia in the Newborn—Martin Gershman, M.D., San Francisco.

Discussion by Margaret Jones, M.D., Los Angeles.

3:40 — Lipoid Storage Disease—Ralph E. Knutti, M.D., Los Angeles.

Discussion—Phillip Sturgeon, M.D., Los Angeles.

4:10 — Premature Care—Alonzo B. Cass, M.D., Los Angeles.

Discussion—J. Parmelee, Los Angeles.

4:40 — Business Meeting.

WEDNESDAY, MAY 11

2:00 — Baptist Church, Philharmonic Building

Joint Meeting with Sections on Eye, Ear, Nose and Throat, Obstetrics and Gynecology, and Public Health

For Program, see Section on Eye, Ear, Nose and Throat

PUBLIC HEALTH

Malcolm H. Merrill, M.D., Berkeley, *Chairman*
 Edward Lee Russell, M.D., Santa Ana, *Vice-Chairman*
 Martin Mills, M.D., Richmond, *Secretary*



MALCOLM H. MERRILL
 Chairman, Public Health



MARTIN MILLS
 Secretary, Public Health

SUNDAY, MAY 8

Conference Room 9, Biltmore Hotel

2:00 - Chairman's Address: Recent Trends in Public Health—Malcolm H. Merrill, M.D., Berkeley.

2:20 - Multiphasic Survey—Mass Screening for Several Diseases Among 1,000 Industrial Employees in San Jose, California—C. Kelly Canelo, M.D., Dwight M. Bissell, M.D., San Jose, Herbert K. Abrams, M.D., by invitation, and Lester Breslow, M.D., San Francisco.

Discussion: Roy O. Gilbert, M.D., Los Angeles, and Dwight M. Bissell, M.D., San Jose.

3:05 - Business Recess. Election of Officers.

3:25 - A Coordinated Tuberculosis Control Program. Edward L. Russell, M.D., Santa Ana, and Erwin P. Brauner, M.D., Richmond.

Discussion: Edward Kupka, M.D., San Francisco.

3:55 - Public Health Aspects of Lymphopathia Venereum—Richard Koch, M.D., San Francisco.

Discussion—A. Frank Brewer, M.D., and Paul Fasal, M.D., San Francisco.

MONDAY, MAY 9

2:00 - Baptist Church, Philharmonic Building

Joint Meeting with Sections on Pediatrics and General Practice

For Program, see Section on Pediatrics

TUESDAY, MAY 10

2:00 - Conference Room 9, Biltmore Hotel

2:00 - Coccidioidal Meningitis—William Buss, M.D., Bakersfield.

Discussion—Robert Cohen, M.D., and Myrnne Gifford, M.D., Bakersfield.

2:35 - Epidemiologic Study of Poliomyelitis in San Diego in 1948—Henrik L. Blum, M.D., San Diego, by invitation.

Discussion—K. H. Sutherland, M.D., Los Angeles.

3:05 - Mental and Emotional Factors Affecting a Diphtheria Immunization Program—Hubert O. Swarthout, M.D., San Luis Obispo.

Discussion.

3:35 - Diarrhea of the Newborn: Review of the Literature—Lester S. McLean, M.D., Vallejo.

Discussion.

WEDNESDAY, MAY 11

2:00 - Chapel, Baptist Church, Philharmonic Building

Joint Meeting with Sections on Eye, Ear, Nose and Throat, Obstetrics and Gynecology, and Pediatrics

For Program, see Section on Eye, Ear, Nose and Throat

RADIOLOGY

Albert K. Merchant, M.D., Stockton, *Chairman*
 Sydney F. Thomas, M.D., Palo Alto, *Secretary*



ALBERT K. MERCHANT
 Chairman, Radiology



SYDNEY F. THOMAS
 Secretary, Radiology

SUNDAY, MAY 8

2:00 - Conference Room 2, Biltmore Hotel

Joint Meeting with Section on Urology

2:00 - X-ray Appearance of Central Fat Tissue: Significance in Urography—Frank Windholz, M.D., San Francisco.

Discussion.

2:30 - Osteitis Pubis—Carleton C. Wright, M.D., and Edward W. Beach, M.D., Sacramento.

Discussion.

3:00 - Displacements of the Ureter—Roy B. Weathered, Los Angeles.

Discussion.

3:30 - Space-Occupying Lesions of the Kidney—Sydney F. Thomas, M.D., Palo Alto.

Discussion.

MONDAY, MAY 9

9:30 - Ballroom, Biltmore Hotel

Joint Meeting with Sections on General Medicine, General Surgery, and General Practice

For program, see Section on General Medicine.

MONDAY, MAY 9

1:30 - Conference Room 4, Biltmore Hotel

1:30 - Business Meeting and Election of Officers.

2:00 - Deep Roentgen Therapy to the Nasopharynx—Harold R. Morris, M.D., Redlands.

Discussion.

2:30 - Carcinoma of Cervix Uteri—Grant Beckstrand, M.D., Long Beach.

Discussion.

3:00 - Radiation versus Surgery for Cancer of the Tongue—George S. Sharp, M.D., and Eugene Demaree, M.D., Pasadena.

Discussion.

3:30 - Benign Tumors of the Gastro-Intestinal Tract—Marshall B. Tucker, M.D., Oakland.

Discussion.

4:00 - Recess—Annual Meeting of Pacific Roentgen Society.

UROLOGY

Frederick A. Bennetts, M.D., Los Angeles, *Chairman*
 Arthur B. Cecil, M.D., Los Angeles, *Vice-Chairman*
 James Ownby, Jr., M.D., San Francisco, *Secretary*



FREDERICK A. BENNETTS
 Chairman, Urology



JAMES OWNBY, JR.
 Secretary, Urology

SUNDAY, MAY 9

2:00 — Conference Room 2, Biltmore Hotel
 Joint Meeting with Section on Radiology
 For Program, see Section on Radiology.

MONDAY, MAY 9

9:00 — Conference Room 9, Biltmore Hotel
 9:00 — The Technique of Transurethral Surgery—
 A Motion Picture in Color—Robert J. Prentiss, M.D., San Diego, and R. G. Bunge, M.D., Iowa City, Iowa, by invitation.
 9:30 — Experience with Transurethral Prostatectomies—Ralph B. Mullenix, M.D., Robert J. Prentiss, M.D., and Robert E. DeLaval, M.D., San Diego.
 Discussion opened by James L. MacDonald, M.D., Oakland.
 10:00 — Some Aspects of Calculus Disease of the Kidney—R. H. Flocks, M.D., Iowa City, Iowa, by invitation.
 Discussion opened by James R. Dillon, M.D., San Francisco.
 11:00 — Business Meeting.

WEDNESDAY, MAY 11

2:00 — Conference Room 9, Biltmore Hotel

2:00 — Chairman's Address: Solitary Renal Cyst, A Clinical Syndrome—Frederick A. Bennetts, M.D., Los Angeles.
 2:30 — Advanced Urological Disease in the Presence of Normal Urine—Donald W. Atcheson, M.D., Riverside.
 Discussion opened by Frank Hinman, Jr., M.D., San Francisco.
 3:00 — Hydrocalycosis of a Single Renal Calyx in the Newborn Infant with Complete Destruction of the Kidney—Henry M. Weyrauch, M.D., San Francisco, and Albert E. Fleming, M.D., San Francisco, by invitation.
 Discussion opened by John W. Dorsey, M.D., Long Beach.
 3:30 — Partial Resection of the Kidney for Renal Calculi—Morton M. Mayers, M.D., Los Angeles.

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C. M. A. Cancer Commission Pre-Convention Conference

BILTMORE HOTEL, LOS ANGELES

SATURDAY, MAY 7

The preconvention conferences sponsored by the Cancer Commission will be held at the Biltmore Hotel on Saturday, May 7, the day preceding the opening of the California Medical Association meeting.

PATHOLOGY

PATHOLOGY—Conference Room 1, Biltmore Hotel

The preconvention conference on Microscopic Tumor Pathology will be held from 10:00 a.m. to 12 noon and from 2:00 p.m. to 5:00 p.m., under the chairmanship of Dr. Edward Butt, Los Angeles. Dr. N. Chandler Foot, professor of surgical pathology, Cornell University, will be the moderator. Tumor diagnostic problems will be presented and discussed. Members who attend this conference are requested to bring their own microscopes and to register now with Dr. John Budd, 1407 South Hope Street, Los Angeles 15.

RADIOLOGY

RADIOLOGY—Conference Room 2, Biltmore Hotel

The preconvention conference on Radiology will be held from 10:00 a.m. to 12 noon and from 2:00 p.m. to 5:00 p.m., under the chairmanship of Dr. Sidney Mesirow, Beverly Hills. Dr. Wybren Hiemstra of Los Angeles is secretary.

GENERAL MEETING

GENERAL CONFERENCE FOR PRIVATE PRACTITIONERS AND MEMBERS OF CANCER COMMITTEES—Conference Room 4, Biltmore Hotel

Presiding: J. Homer Woolsey, M.D., vice-chairman, Cancer Commission

2:00—Delay as the Cause of Cancer Mortality—A Round Table Symposium Featuring the Examination, Diagnosis and Treatment of Early Cancer.

3:30—The Cancer Committee of the County Medical Society and the Cancer Control Program.

1. A Report of the California Division of the American Cancer Society—Mr. Leonard V. Griffith, executive vice-president.
2. Report of the Cancer Commission—David A. Wood, M.D., secretary.
3. Round Table Discussion of the Functions of the Cancer Committees.

EVENING CONFERENCE

The Cancer Commission Dinner will be held at 6:30 p.m. at the Biltmore Hotel, Conference Room 1, for members of the Cancer Committees of the County Medical Societies. Dr. John Cline, presiding. Interested physicians are invited. Make reservations with Dr. E. Eric Larson, 1930 Wilshire Boulevard, Los Angeles, or Dr. David Wood, 54 Commonwealth Avenue, San Francisco. \$5.00 per plate.

A report of the cancer control activities of the California Department of Public Health will be given by Dr. Lester Breslow.

Immediately following the dinner there will be a Panel Discussion on Early Cancer of the Breast. Dr. Alson Kilgore will be the moderator. The panel will consist of Dr. Ian Macdonald, assistant professor of surgery, University of Southern California; Dr. Nathan A. Womack, professor of surgery, University of Iowa; and Dr. Lyell C. Kinney, chairman, Cancer Commission, San Diego.

SCIENTIFIC SESSIONS											
	SUNDAY MAY 8			MONDAY MAY 9			TUESDAY MAY 10			WEDNESDAY MAY 11	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
BILTMORE THEATER											
BILTMORE HOTEL Ballroom	10:00		1:30								
Bilmore Bowl			General Medicine General Practice Allergy								
Music Room											
Conference Room 1											
Conference Room 2											
Conference Room 4											
Conference Room 5											
Conference Room 8											
Conference Room 9											
BAPTIST CHURCH 2nd Floor Philharmonic Building, Fifth and Olive Streets											
Music Room Bilmore											
COUNCIL OF THE C.M.A. MEETS DAILY AT 7:30 A.M. IN CONFERENCE ROOM 6, BILTMORE HOTEL											
SCIENTIFIC EXHIBITS—CONFERENCE ROOM 7, BILTMORE HOTEL											
MEDICAL MOTION PICTURES—GALERIA ROOM, BILTMORE HOTEL											

WOMAN'S AUXILIARY
TO THE
CALIFORNIA MEDICAL ASSOCIATION
NINETEENTH ANNUAL CONVENTION

Headquarters, Biltmore Hotel • Los Angeles, California



MRS. LAWRENCE K. GUNDRUM
President



MRS. RAYMOND T. WAYLAND
President-Elect

Convention Chairman, Mrs. Newell Jones

REGISTRATION

Sunday, May 8, 9 a.m.-12 noon, 3-6 p.m.

Monday, May 9, 9 a.m.-5 p.m.

Tuesday, May 10, 9 a.m.-12 noon

SUNDAY, MAY 8

8:00 a.m.—Executive Committee Meeting—President's Room.

10:00 a.m.—Opening Session of the California Medical Association. Report of year's work by the President of the Auxiliary. All Auxiliary members and Doctors' wives are invited to attend.

10:00 a.m.—Pre-Convention Board Meeting—Conference Room 8, Biltmore Hotel.

MONDAY, MAY 9

9:30 a.m.—First Session of the Nineteenth Annual Convention—Burdette Hall, Second Floor, 427 West Fifth Street.

12:30 p.m.—Luncheon honoring the State President, the President-Elect and Past State President, members of the Advisory Board—Biltmore Bowl, Biltmore Hotel.

7:30 p.m.—California Medical Association Annual Dinner honoring the President.

TUESDAY, MAY 10

9:30 a.m.—Second Session of the Nineteenth Annual Convention—Burdette Hall, Second Floor, 427 West Fifth Street.

12:00 noon-12:30 p.m.—School of Instruction for County Presidents, Officers and Committee Chairmen.

12:30-1:30 p.m.—Post-Convention Board Meeting.

3:00-6:00 p.m.—Party honoring the wife of the President of the California Medical Association—Conference Rooms 2 and 3, Biltmore Hotel.

Technical Exhibits

The Association is fortunate in having a well-rounded technical exhibit to offer those attending the 1949 Annual Session. Exhibits will be found in the Ballroom Foyer and the Renaissance Room, located at either end of the Galeria floor of the Biltmore Hotel.

Members are reminded that the technical exhibitors pay the Association for the privilege of participating in the exhibit and that the funds from this source are entirely applied to the cost of the meeting. This makes it possible for the Association to conduct a large Annual Session without the need of charging a registration fee or increasing your dues to cover the expense.

You may show your appreciation of this valuable contribution by attending the exhibits, visiting and registering with the exhibitors and letting them know they are more than welcome at the meeting. From the scientific point of view, the exhibitors will have on display the latest in therapeutic and diagnostic agents, a display which is not possible to find similarly assembled except at a meeting of this type.

All exhibitors are listed below, with their locations. On the following pages is an alphabetical listing which gives a brief description of the products and services displayed for your information and convenience.

About the Exhibitors

ABBOTT LABORATORIES

North Chicago, Illinois

Abbott Laboratories will feature Pentothal.

A. S. ALOE COMPANY

Los Angeles

A. S. Aloe Company will exhibit surgical, laboratory and physiotherapy equipment, of its own manufacture, and a complete line of national standard lines of doctors' accessories.

AMES COMPANY, Inc.

Elkhart, Indiana

Ames Company representatives will be glad to discuss Decholin, the standard hydrocholeretic agent for the treatment of biliary tract diseases, and Decholin Sodium, pure sodium dehydrocholate.

They will be demonstrating Clinitest and Hematest—simplified tests for the detection of urine-sugar and occult blood.

AYERST, McKENNA & HARRISON, Ltd.

New York, New York

Premarin (Estrogenic Substances—water-soluble) — a highly effective and well-tolerated preparation of naturally-occurring, orally-active, conjugated estrogens (equine). The potency of Premarin is expressed in terms of its principal estrogen, sodium estrone sulfate.

Premarin provides convenience of administration and flexibility of dosage. Four potencies of Premarin Tablets are available. Premarin is also presented in liquid form.

THE BAKER LABORATORIES, Inc.

Cleveland, Ohio

The Baker display is built around the six-step approach to optimum infant nutrition which leads to the picture of the happy mother and the healthy child. An adjusted protein, two carbohydrates, a modified fat, vitamins, soluble mineral salts and iron, coupled with simplicity of preparation and low cost, provide for complete nutrition and insure cooperation in the home. Baker's Modified Milk, liquid or powder, may be used interchangeably from birth to the end of the bottle-feeding period. May we discuss your infant feeding problem with you?

BARNES-HIND LABORATORIES, Inc.

San Francisco

Galeria Room

We cordially invite you to visit our exhibit located in the Galeria Room during the convention. The exhibit is featuring the comparative absorption, excretion and storage of oily and water dispersible vitamin A.

Renaissance Room

DON BAXTER, Inc.

Glendale

Renaissance Room

Featured in the Don Baxter exhibit will be the completely new, expendable blood and plasma administration set with a long, slotted strainer which pre-filters within the container and eliminates troublesome clogging, heretofore a major factor causing critical delays in blood administration.

Of particular interest will be the new, expendable plastic stomach and gastro-intestinal tubes for intranasal intubation. The smooth plastic material assures greater patient comfort and cooperation.

M. J. BENJAMIN

Los Angeles

Renaissance Room

A representative assortment of special appliances for orthopedic work will be shown as space permits.

Other types will be shown and discussed upon request.

Also shown will be the Springalumin Truss which has been developed to a very successful state for individual hernia problems.

M. J. Benjamin carries 57 models of S. H. Camp & Company Surgical Supporters. The most representative stock to be found in this area.

BILHUBER-KNOLL CORP.

Renaissance Room

Orange, New Jersey

The fine medicinal chemicals, Bromural, Dilaudid, Metrazol, Octin, Theocalcin, etc., which fill an important place in the physician's armamentarium of dependable and useful medication, are found at the Bilhuber-Knoll Booth No. 52. These prescription chemicals are adaptable for prescribing alone or in combinations to meet the needs of the individual patient.

Visit their exhibit for the latest developments among these and their other products.

THE BORDEN COMPANY

Renaissance Room

New York, New York

A new improved better than ever Biolac is presented in Booth No. 40—better nutritionally and better physically. Unchanged are the dilutions, analysis, caloric values, vitamin fortification, and ease of feeding. This new improved Biolac, a liquid modified milk for infant feeding, brings to you the latest findings of nutritional science . . . at no increase in cost.

Likewise exhibited will be our long-established products, Mull-Soy, Dryco, Beta Lactose, Gerilac, Klim and Merrell-Soule special milks.

BRISTOL LABORATORIES, Inc.

Syracuse, New York

Renaissance Room

Bristol Laboratories exhibit will be devoted to the display of many of its antibiotic and pharmaceutical products. Some of our products on display will be: *Flo-Cillin "96,"* the original Procaine Penicillin G in Oil with Aluminum Monostearate; *Streptomycin Ointment,* the first ointment of this type to be put on the market; *Vytinic,* a highly palatable liquid hematinic with Folic Acid; *Soluble Penicillin Tablets.*

Qualified representatives will be on hand to answer questions and to give you samples and literature.

A. M. BROOKS COMPANY

Los Angeles

Galeria Room

We extend a cordial invitation to you to stop at our booth for examination and demonstration of the Raytheon Microtherm, microwave, (radar) diathermy. See for yourself the most outstanding development in diathermy today. Also featuring ADC Audiometers with the latest contribution to the field of scientific hearing testing. Brooks Thermosine—Sine-galvanic—Ultraviolet lamps. Capable representatives will be on hand at all times to answer questions on above equipment.

BURROUGHS WELLCOME & COMPANY

Tuckahoe, New York

Ballroom Foyer

Among significant products featured will be 'Wellcome' brand Globin Insulin with Zinc 'B. W. & Co.,' which provides an action which is timed to be more suitable for the average diabetic; 'Dexin' brand High Dextrin Carbohydrate, in which the non-fermentable proportion predominates; Digoxin, the pure, stable, crystalline glycoside which offers predictable digitalization; and 'Methedrine,' a recent sympathomimetic drug of wide therapeutic application.

CAMEL CIGARETTES

New York, New York

Ballroom Foyer

Camel Cigarettes will exhibit a large detailed photograph showing the calculated absorption of nicotine from cigarette smoke in the human respiratory tract. Representatives will be on hand to discuss any phase of the physiological effects of smoking.

CAMERON SURGICAL SPECIALTY COMPANY

Chicago

Ballroom Foyer

See the new Rado-Gap Cauterodynes with Spark-Gap, Radio-Frequency and Blended Circuits, the Cauteradio and other Units and Accessories for all phases of Electro-Surgery, Electro-Cauterization, Electro-Coagulation, Desiccation and Fulguration; Electro-Diagnostic Lamp and Instrument Outfits; the new stainless steel Boros Flexible Esophagoscope and Broncho-Esophago-Laryngoscopic Sets; Coagulair Sigmoidoscope; Tele-Vaginalite; Mirrolite and other Headlites; Binocular Loupes; Illuminated Specula, Endoscopes, Retractors and other Instruments for all types of Diagnosis, Treatment and Surgery.

CARNATION COMPANY

Los Angeles

Renaissance Room

You are invited to visit Booth No. 54 where you will see an attractive display on Carnation Evaporated Milk—"the milk every doctor knows." Some valuable information on the use of this milk for infant feeding, child feeding, and general diet will be presented and the method by which Carnation is generously fortified with pure crystalline Vitamin D—400 U.S.P. units per reconstituted quart—will be explained. Interesting literature will also be available for distribution.

CIBA PHARMACEUTICAL PRODUCTS, Inc.

Summit, New Jersey

Ballroom Foyer

Ciba Pharmaceutical Products, Inc., Summit, New Jersey, Booth No. 7, invite you to visit their exhibit for latest information on *Priscol*, a valuable adjunct to the treatment of peripheral vascular disease. *Pyribenzamine HCl*, the antihistaminic drug for prevention and relief of anaphylaxis and many forms of allergy, will also be featured.

Representatives in attendance will gladly answer any questions about these and other Ciba products.

COCA-COLA COMPANY

Atlanta, Georgia

Galeria Room

Ice-cold Coca-Cola will be served the delegates through the joint cooperation and courtesy of The Coca-Cola Bottling Company of California, Los Angeles, and The Coca-Cola Company.

COMMERCIAL SOLVENTS CORPORATION

New York, New York

Renaissance Room

CSC Pharmaceuticals will exhibit, in addition to its complete line of penicillin products, several new pharmaceuticals. Foremost among these is Bacitracin, a new antibiotic recently introduced by CSC, in the form of ointment, ophthalmic ointment, and in vials, and tablets. Inositol and Syrup Choline Bicarbonate will be included in the exhibit, as well as Kwell Ointment.

THE CONTINENTAL MEDICAL BUREAU

Los Angeles

Renaissance Room

The Continental Medical Bureau, Agency, of Los Angeles (Helen Buchan, Director) will have representatives in Booth No. 34.

Complete service is offered to the medical profession. A physicians-surgeons registry lists California Licensed physicians seeking new locations as well as groups and established men interested in contacting associate doctors. Hospital personnel and doctors' office personnel registered; files available for your review.

Our real estate and business department offers for sale or lease hospitals, clinic buildings, office-residence combinations and established practices.

No registration fee—no obligation unless we produce results. Stop at Booth No. 34 and discuss our services.

CUTTER LABORATORIES

Berkeley

Renaissance Room

The Cutter Laboratories exhibit in Space No. 31 will have as its center an unusual mechanical book display. We will feature our complete line of pediatric products including triple immunizing vaccine Dip-Pert-Tet, Plain and Aluminum Hydroxide Absorbed; Blood Fractions, including Immune Serum Globulin for measles modification, Albumin and Hypertussin; and Intravenous Solutions and Satisfisks. Won't you stop in and see us?

F. A. DAVIS COMPANY

Philadelphia, Pennsylvania

Renaissance Room

These and other new books and new editions may be examined at Booth No. 35: *Pain Syndromes*—Judovich and Bates; *Clinical Neurology*—Alpers; *Medical Diagnosis*—Loewenberg; *Treatment in General Medicine*—Reimann; *Cardiovascular Disease*—Stroud; *Clinical Cystoscopy*—McCrea; *Peripheral Vascular Diseases*—Kramer; *Clinical Tuberculosis*—Goldberg; *Arthritis*—Bach; *Handbook of Treatment*—Gruber; *Dermatology*—Greenbaum; *Cyclopedia of Medicine, Surgery and Specialties*—Piersol and Bortz; *Clinical Radiology*—Pillmore; *Diseases of the Gallbladder*—Behrend; *Pediatric Therapeutics*—Litchfield-Dembo; *Romance of Medicine and Medicine Throughout Antiquity*—Gordon; *Pediatric Progress*—Litchfield-Dembo; *Internal Diseases of the Eye*—Troncoso; *Cyclopedic Medical Dictionary*—Taber; *Proctology in General Practice*—Smith.

DESITIN CHEMICAL COMPANY Galeria Room
Providence, Rhode Island

Desitin Ointment, the pioneer in external cod-liver-oil therapy combines crude high potency Norwegian cod-liver-oil, zinc oxide and talcum in a lanolin petrolatum base. Owing to its content of a balanced and standardized crude cod-liver-oil, Desitin Ointment alleviates pain and relieves itching promptly. It promotes granulation and epithelialization. Desitin Ointment is not liquefied under body temperature nor decomposed by secretion, forming therefore a perfect protection for the skin. Indications: Postoperative dressings, slow-healing wounds; indolent varicose chronic ulcers, burns of all degrees; lacerations; bed sores; hemorrhoids and fissures.

Desitin Powder: A unique medicinal toilet powder. It contains crude cod-liver-oil, zinc oxide, magnesium oxide and talcum. Use as Desitin Ointment.

THE DOHO CHEMICAL CORPORATION Galeria Room
New York, New York

The makers of Auralgan are featuring at this meeting, their new Sulfa preparation, O-Tos-Mo-San, indicated in the treatment and control of chronic suppurative ears. Our representatives will be happy to explain in detail the workings of these medications.

Also, to distribute hospital aural instruction charts and other charts of the anatomical and pathological diseases of the ear.

DRUG SPECIALTIES, Inc. Galeria Room
Los Angeles

We plan to display and sample the following products and have medical literature available on them: *Levo Bel*: A pure levorotatory Belladonna alkaloids for use as an antispasmodic in vagus hypertension. *Hematinic F*: Iron-Liver combination with folic acid. *Sulfa Mulsion*: Micro suspension of three sulfonamides in a pleasant vehicle.

EATON LABORATORIES, Inc. Renaissance Room
Norwich, New York

The following Council-accepted Eaton specialties will be exhibited: Furacin Soluble Dressing—a topical antibacterial agent (nitrofurazone N.R.) with a wide antibacterial spectrum, in a water-soluble ointment-like base. Furacin Solution—for use when a liquid vehicle is more convenient. Lorophyn Suppositories and Lorophyn Jelly—for conception control when pregnancy is contraindicated. Aspogen—an amino acid-basic aluminum salt (di-hydroxy aluminum aminoacetate N.R.) for use in the treatment of peptic ulcer and hyperchlorhydria.

ENDO PRODUCTS, Inc. Galeria Room
Richmond Hill, New York

The Endo exhibit will feature A.M.A. Council accepted products, such as *Hycodan*, *Norodin*, *Mesopin*, etc. Many of our products will be sampled to our many friends in the medical profession.

C. B. FLEET COMPANY, Inc. Ballroom Foyer
Lynchburg, Virginia

C. B. Fleet Co., Inc., cordially invites you to stop by Booth No. 1 for a short visit with the three California representatives who see you in your offices about once a year. Perhaps there is something about Phospho-Soda (Fleet), the pure, stable, aqueous concentrate of the two U.S.P. Sodium Phosphates, you would like to discuss with them.

GENERAL ELECTRIC X-RAY CORPORATION Renaissance Room
Los Angeles

A display of X-Ray and Electro-Medical Equipment and Supplies.

GERBER PRODUCTS COMPANY

Fremont, Michigan Renaissance Room

You are cordially invited to visit Gerber's exhibit of Strained Foods, Junior Foods, Pre-cooked Cereals and the new Gerber-Armour Meats for Babies.

We invite your inspection of our service materials on infant feeding and adult special diets, especially the newly revised and enlarged Special Diet Recipes Booklet.

GOLDEN STATE COMPANY, Ltd. Galeria Room
Los Angeles

Golden State Dairy Products will feature an exhibit displaying their products of special interest to the medical profession. These will include Golden V Vitamin milk, Vitamin D milk, Buttermilk, Skim Milk, Cream O' Gold Premium Milk, Yami Yogurt, Vitamin D Increased Evaporated Milk and Powdered Whole Milk, sampling doctors with these products and distributing literature to further demonstrate the great nutritional values of dairy products in the diet. The theme of the exhibit will be "You Strike It Rich in Golden State Dairy Products" which is not only the company slogan but ties in with the current three-year Centennial Celebration.

GUILDCRAFTERS OF HOLLYWOOD

Hollywood Galeria Room

Art metalwork in the form of plaques. The designs are in-sculptured, the lettering engraved. Quotations, Oath of Hippocrates, etc. Awards for outstanding service. Medical Fraternities and Honor Societies certificates in metal. Push buttons in chrome, bronze and brass for home and office. Special desk, wall and outdoor signs. Maker of the plaques for the Past Presidents of the California Medical Association.

HARROWER LABORATORY, Inc.

Glendale Renaissance Room

The Harrower Laboratory technical exhibit presents gastroscopic and acidity control studies relative to Mucotin, the coating antacid. The exhibit has three main points of interest: (1) A case history report of a large benign crater ulcer. The ulcer and its response to treatment are illustrated gastroscopically. (2) The effect of aluminum hydroxide, magnesium trisilicate, Sippy type formula and Mucotin on the degree of acidity, duration of antacid actions, and acid rebound is presented graphically. (3) Gastroscopic studies showing the coating action of Mucotin on a large gastric ulcer. Mucotin is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

HOFFMAN-LA ROCHE, Inc.

Renaissance Room
Nutley, New Jersey

Roche will feature Thephorin Ointment, a superior anti-pruritic. Thephorin Ointment, which contains 5 per cent Thephorin (a superior antihistamine) in a Carbowax base, is especially valuable in the treatment of allergic dermatoses, pruritus and insect bites. Thephorin, also available in liquid and tablet forms, is the Roche brand of phenindamine. It is very helpful in the control of allergic complaints. Presidol 'Roche,' the new sedative-hypnotic which is not a barbiturate but a pyridine derivative, will also be displayed. Presidol, supplied in scored 0.2-Gm. tablets, is mild and well tolerated by young and old patients alike.

HOLLAND-RANTOS COMPANY, Inc.

New York, New York Renaissance Room

Koromex Jelly and Koromex Cream are well-known to physicians generally for their uniformly high standard of quality and time-tested dependability. You will want to see the latest improvements in package design, the economical large refill tube now available, as well as the attractive, ivory-colored plastic box (Koromex Refillable

Unit) which provides a sanitary, convenient, permanent container that will appeal to your patients. Medical service representatives will be pleased to discuss other H-R products of particular interest to you.

LAKESIDE LABORATORIES, Inc. Ballroom Foyer
Milwaukee, Wisconsin

Three Lakeside specialties will be exhibited . . . Mercuhydrin—the mercurial diuretic in the modern management of cardiac decompensation in general practice. New schedules and techniques of medical treatment in this condition will be the point of interest at the exhibit. Cholatropin—a new antispasmodic, hydrocholeretic combination. Estrotate—the most potent acetate ester of the natural occurring true ovarian hormone alpha-estradiol. Representatives will be prepared to discuss these products and will have available reprints and other materials.

LANTEEN MEDICAL LABORATORIES, Inc.

Chicago, Illinois

Galeria Room

Lanteen Medical Laboratories, Inc., extends a cordial invitation to visit Booth No. 69. Representatives will be pleased to discuss a new diaphragm fitting technique with you and explain the advantages of the Lanteen Flat Spring Diaphragm.

LEDERLE LABORATORIES Renaissance Room
New York, New York

You are cordially invited to visit our exhibit in Booth No. 47, where you will find representatives who are prepared to give you the latest information on Lederle products.

LIBBY, McNEILL & LIBBY Renaissance Room
Chicago, Illinois

Physicians are cordially invited to stop and discuss Libby's strained and homogenized baby foods, which are featured.

ELI LILLY AND COMPANY Ballroom Foyer
Indianapolis, Indiana

Your Lilly medical service representative cordially invites you to visit the Lilly exhibit located in Booth No. 14. Many new therapeutic developments will be featured and literature on these products will be available. Lilly medical service representatives are to be in attendance to aid visiting physicians in every way possible.

J. B. LIPPINCOTT COMPANY Ballroom Foyer
Philadelphia, Pennsylvania

J. B. Lippincott Company presents an interesting and active exhibit of professional publishing. With the "pulse of practice" centering in an advisory editorial board of active clinicians who constantly review the field, current and coming trends in medicine and surgery are known continually. On the studied recommendations of these medical leaders, Lippincott Selected Professional Books are undertaken.

LOV-É BRASSIERE COMPANY Renaissance Room
Hollywood

Lov-É Brassiere Company, manufacturers and retailers of the extensive Lov-É line of corrective and surgical brassieres. These custom-fitted brassieres are an aid in the treatment of specific breast conditions. From more than 500 bust-cup-torso size variations the patient's correct size is selected, then fitted to her individual measurements by specially trained Lov-É technicians, according to the physician's exact instructions.

M & R DIETETIC LABORATORIES, Inc.

Columbus, Ohio

Ballroom Foyer

M & R Dietetic Laboratories, Inc., Booth Number 21, will display Similac, a food for infants. Our representatives will appreciate the opportunity to discuss the merit and suggested application for both the normal and special feeding cases.

THE S. E. MASSENGILL COMPANY

Bristol, Tennessee

Galeria Room

Representatives of the S. E. Massengill Company are in attendance at the exhibit to discuss with you a number of Massengill products which are being featured during this meeting. The design of the booth calls your attention to the wide coverage offered the medical profession through the medical service representatives and branch offices of the company. You are invited to visit and talk with us on the featured preparations and register for sample packages and literature.

MEAD JOHNSON & COMPANY

Evansville, Indiana

Renaissance Room

The newer knowledge of medical nutrition is translated into practical application with the products and diet services at the Mead Johnson Exhibit.

There are new Mead Products for the pediatrician. There will be special products for the obstetrician. Mead's pioneering of the protein field has perfected Amigen for parenteral and Protenum, for oral use.

Mead's California representatives will be present.

THE MEDICAL PROTECTIVE COMPANY

Fort Wayne, Indiana

Ballroom Foyer

The Medical Protective Company is represented at Booth No. 22 where you are invited to call. Medical Protective Service is an institution of the medical profession whose legal liability problems we have concentrated upon for fifty years.

Bring your professional liability questions and problems to Booth No. 22.

Our representative is at your service to present our protection plan, to explain the peculiar relation of the doctor to the law which governs your practice or to discuss any particular phase of professional liability in which you are especially interested.

MERCK and COMPANY

Rahway, New Jersey

Galeria Room

The products featured in this display include Cobione (Crystalline Vitamin B₁₂ Merck), as well as Neo-Antergan and Dihydrostreptomycin. Neo-Antergan is the Merck antihistaminic drug which has proven to be the product of choice of many clinicians throughout the country. Dihydrostreptomycin Merck represents a great achievement in the evolution of antibiotic therapy. Cobione will prove of interest to all.

THE WILLIAM S. MERRELL COMPANY

Cincinnati, Ohio

Ballroom Foyer

Prompt relief in 85 per cent to 90 per cent of bronchial asthma and associated conditions, with inconspicuous side effects, is the report from an 8-year clinical study of Nethaphyl in 1,400 cases, a new Merrell Product. Nethaphyl is safe over long periods of use, prolonged in action, and effective in most ephedrine-fast cases.

E. S. MILLER LABORATORIES, Inc.

Los Angeles

Renaissance Room

The E. S. Miller Laboratories, manufacturers of ethical Pharmaceutical Products since 1923, will exhibit a complete line of injectables, tablets and capsules. Especially featured will be their line of Hormones.

C. V. MOSBY COMPANY
St. Louis, Missouri

The newest and latest books in medicine, surgery and the specialties will be on exhibit for your inspection at Booth No. 46.

NESTLÉ COMPANY INC.
New York, New York

We are going to serve our soluble coffee product, Nescafé, to everyone and are planning to display our Nestlé Evaporated Milk and baby food products. These consist of Lactogen, Dextrogen, Pelargon and Nestlé Food.

THE NETTLESHIP COMPANY

Los Angeles

Renaissance Room

The Nettleship Company of Los Angeles, Malpractice Insurance Specialists, Administrators of official malpractice (also Group Accident and Health) insurance programs for L.A.C.M.A.—Santa Barbara, Kern, Tulare and Orange County Societies. Serving the healing profession since 1925. Specimen consent and authority forms available for convention attendants.

ORTHO PHARMACEUTICAL CORPORATION

Raritan, New Jersey

Galeria Room

Ortho cordially invites you to Booth No. 65 where the full line of Ortho specialties will be exhibited. Featured will be Ortho Gynol, Ortho Creme, and other Ortho products used in the control of conception. Newer gynecological pharmaceuticals will also be on display.

PARKE, DAVIS & COMPANY Renaissance Room
Detroit, Michigan

Members of the Parke, Davis & Company Medical Service Staff will be on hand at our Commercial Exhibit for consultation and general discussion of the products classified in our Pharmaceutic, Antibiotic, and Biologic Lines. Important Specialties, such as Penicillin S-R, Benadryl, Vitamin Products, Hypnotics, Antibiotics, Etamon, Oxy-cel, Thrombin Topical, Influenza Virus Vaccine, and other Biologics will be featured. You are cordially invited to visit our booth with the assurance that your interest will indeed be very much appreciated.

THE PELTON & CRANE COMPANY
Detroit, Michigan

Renaissance Room

The Pelton line affords the widest selection of private office sterilizers offered by any manufacturer: Portable Sterilizers, 8 to 20 inches, automatic or manual control, bright or satin chrome finish. Cabinet Models featuring enamel or laminated tops, with or without timer, double or single door . . . all with interior illumination. Autoclaves with selective temperature control at no extra cost. Water Sterilizers in 2- and 5-gallon sizes. Price conscious or luxury minded, your logical choice is Pelton.

PET MILK COMPANY
San Francisco

Ballroom Foyer

You are invited to visit Booth No. 6 where you will see an attractive display of Pet Milk. Valuable information on the use of this milk for infant feeding, child feeding and general diet will be presented. An accurate description of the fortification of Pet Milk with vitamin D will be available to physicians who are interested. The Pet Milk Formula Selector and Solid Food Guide and the Pet Milk weaning cup will be available to doctors wishing them. A miniature can of Pet Milk will be given to all registrants.

Renaissance Room

PHILIP MORRIS & CO., Ltd., Inc.
New York, New York

Renaissance Room

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject and problems on the physiological effects of smoking.

PICKER X-RAY CORPORATION

Galeria Room

The Picker X-Ray, Southern California, Inc. in cooperation with the Sicular X-Ray Company, Inc., of San Francisco, are displaying the Picker X-Ray Corporation line of x-ray equipment and supplies. Exhibited are the V-7-200MA Transformer and Control with Motor Driven Tilt Table and Motor Driven Spot Film Device.

PLASTISHIELD, INC.

Ballroom Foyer

Minneapolis, Minnesota

To encourage breast feeding of newborn infants, the new Plastishield technique of breast care is rapidly gaining in popularity. This simple, more sterile method of nipple care protects against irritation and eliminates the necessity for messy medication. Plastishields are correctly shaped plastic shields, easily cleaned and conveniently worn beneath the customary hospital support or brassiere. They keep the nipples moist and pliable, thus preventing painful fissuring and soreness.

Trained nurses will be available at our exhibit to explain this new technique.

RADIUM CHEMICAL COMPANY, Inc.

New York, New York

Galeria Room

The Radium Chemical Company, Inc. of New York whose West Coast Sales Office and Radon Apparatus was recently opened in Los Angeles, will exhibit a complete line of the latest in radium and radon accessories. Their California representative, Mr. Charles F. Bergesch, will be in attendance to give information about their radon and radium service.

A. H. ROBINS CO., Inc.
Richmond, Virginia

Renaissance Room

A. H. Robins Co. will conduct a display using draperies and flowers as a background in which the following preparations are to be featured: *Donnatal*—Antispasmodic and Sedative. *Pabalate*—Anti-arthritic and Antirheumatic compound. *Phenaphen*—Analgesic, Sedative, and Antipyretic. *Allbee*—High potency B-complex. *Allbee with C*—Therapeutic dosages B-complex and C vitamins. *Sedobarb*—Effective Sedative and Hypnotic. Literature and samples will be readily available.

J. B. ROERIG AND COMPANY
Chicago, Illinois

Renaissance Room

Members of the California Medical Association are cordially invited to visit the exhibit of J. B. Roerig and Company. Mr. E. H. Roerig will be in charge of the exhibit and will be pleased to offer the services of the Professional Service Department to all interested guests.

SANBORN COMPANY
Cambridge, Massachusetts

Galeria Room

An exhibit of interest to clinicians, specialists, and research men alike—in the fields of cardiology and endocrinology—will be found at the Sanborn Company Booth No. 72.

On display will be working models of such clinical diagnostic instruments as the Sanborn Metabolator, the "all enclosed" metabolism tester; and the Sanborn Viso-Cardiette, leader among direct writing electrocardiographs.

These will be supplemented by more specialized, research-type equipment, including the Poly-Viso Cardiette,

multi-channel biophysical research recorder; the Electro-manometer, outstandingly useful for a wide variety of venous, arterial, intracardiac, and other pressure recordings; and other diagnostic instruments of still more recent development.

SANDOZ PHARMACEUTICALS Ballroom Foyer
San Francisco

This display will feature Mesantoin and Hydantal, new anticonvulsants for the treatment of epilepsy, D.H.E. 45 (Dihydroergotamine) for the parenteral treatment of migraine; Caffergone, for the oral treatment of migraine and other types of headache; Methergine, a new oxytocic and several cardiac glycosides including Cedilanid, Diginid and Strophosid.

Well-informed attendants will be present to answer all inquiries and to discuss new products to be released in the near future.

W. B. SAUNDERS COMPANY Ballroom Foyer
Philadelphia, Pennsylvania

We invite all doctors attending the meeting of the California Medical Association to visit our exhibit where our representative, Mr. J. Keith Chrysler, will display a complete line of our books including Hyman's *Integrated Practice of Medicine*, Bockus' *Gastro-enterology*, Meleney's *Treatment of Surgical Infections*, Snyder's *Obstetric Analgesia and the Child*, Lyons and Woodhall's *Atlas of Peripheral Nerve Pathology*, Crile's *Practical Aspect of Thyroid Disease*, Diet Manual of the Mayo Clinic, De Gowin, Hardin and Alsever's *Blood Transfusion*, Levin and Harvey's *Clinical Auscultation of the Heart*, Fine's *Care of the Surgical Patient*, Conn's *Recent Advances in Therapy*, Dowling's *Acute Bacterial Diseases*, Brans' *Treatment of Heart Disease*, new editions of McLester's *Nutrition and Diet in Health and Disease*, Weiss and English's *Psychosomatic Medicine*, and many others.

SCHENLEY LABORATORIES, Inc. Galeria Room
New York, New York

The Schenley Laboratories' exhibit features Titrilac, an extremely palatable antacid with a titration curve very similar to that of milk. Also on display will be Rutaminal, an exclusive Schenley specialty combining rutin, aminophylline, and phenobarbital; Orapens—buffered penicillin tablets of varying strengths; Monocillin, a procaine penicillin product producing 96-hour blood levels; and Aquacillin, procaine penicillin for aqueous injection.

Well informed personnel will be in attendance. Samples of various products will be available.

SCHERING CORPORATION Renaissance Room
Bloomfield, New Jersey

Buccal Tablets of *Oreton*, *Progynon*, *Proluton*, and *Corate* with the new base Polyhydrol, will be featured at the Schering exhibit. Developed in the Schering research laboratories, the new Polyhydrol base provides a means of completely utilizing hormones without the necessity of injection. *Trimeton*, an outstanding antihistamine, and *Thalamyd*, Schering's brand of phthalylsulfacetamide, a new sulfonamide extremely effective in ulcerative colitis and enteric infections, will highlight the exhibit.

Schering representatives will be present to welcome you and will be happy to answer inquiries concerning Schering's new products as well as their other hormone, x-ray diagnostic, chemotherapeutic, and pharmaceutical specialties.

G. D. SEARLE & CO. Renaissance Room
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Ruphyllin, for abnormal capillary fragility, Hydryllin, new and effective antihistaminic, as well as such time-proven products as Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kio-phyllin, Diodoquin, Pavatrine and Pavatrine with Phenobarbital.

SHARP & DOHME INCORPORATED Galeria Room
Philadelphia, Pennsylvania

Visitors attending the California Medical Association meeting are cordially invited to visit the Sharp & Dohme exhibit in Booth No. 64. Stable, portable 'Lyovac' Normal Human Plasma irradiated to destroy not only bacteria but also the viral contaminants that might cause homologous serum hepatitis merits your attention. Unusual specialties including the popular sulfonamide and antibiotic drugs also will be of major interest. Courteous attendants will be pleased to serve you.

SMITH-DORSEY PHARMACEUTICALS Ballroom Foyer
Lincoln, Nebraska

Aminophylline Suppositories and Estrogenic Hormones will be shown at the Smith-Dorsey exhibit as well as a wide variety of injectable preparations. Physicians are invited to make the Dorsey booth their headquarters during the show and representatives will be happy to discuss the background and use of all products on display.

SMITH, KLINE & FRENCH LABORATORIES Renaissance Room
Philadelphia, Pennsylvania

'Dexedrine' Sulfate and 'Benzedrine' Sulfate—'Benzedrine' Sulfate (racemic amphetamine sulfate, S.K.F.) has, through the years, grown steadily in clinical usefulness. Today, it is one of the fundamental drugs in daily medical practice.

'Dexedrine' Sulfate (dextro-amphetamine sulfate S.K.F.) was developed in the search for an even more outstanding anti-depressant. Largely because of the striking preponderance of its central nervous effect over its weak peripheral activity, it has become the drug of choice in most cases. In weight reduction, it is generally recognized as the most effective drug available for control of appetite.

E. R. SQUIBB & SONS Ballroom Foyer
New York, New York

E. R. Squibb & Sons will feature Dihydrostreptomycin and the new Penicillin Dispolator.

J. W. STACEY, Inc. Ballroom Foyer
San Francisco

At Stacey's Booth No. 12 you will find a display of all of the new medical books for both general practitioners and specialists. You are cordially invited to browse at your leisure.

STAYNER CORPORATION Renaissance Room
Berkeley

Stayner Corporation again expresses its sincere appreciation to the Western Medical Profession for its splendid support. Your cooperation and confidence have made it possible for us to offer over 120 pharmaceutical products of highest quality. Featured at the Stayner Booth will be our product "STS" Lozenges for the local treatment of oropharyngeal infections. We are featuring, as well, our fortified high potency B Complex with Liver and Iron preparation, "Hema-Forte."

THE STUART COMPANY Galeria Room
Pasadena

The *Stuart Formula*, liquid and tablets, multiple vitamin and iron therapy at maintenance level. The *Stuart Therapeutic Multivitamin*, multiple vitamin therapy at the

therapeutic level. The *Stuart Therapeutic B Complex, C*, water-soluble vitamin therapy at the therapeutic level. The *Stuart Hematinic*, iron, copper, B complex and C, therapy at therapeutic level. The *Stuart Hematinic* with Folic Acid. The *Stuart Hematinic* Liquid. These six Stuart products can help simplify nutritional prescriptions. Easy to remember—the name Stuart and the therapy needed. We hope you will visit the Stuart exhibit.

U. S. VITAMIN CORPORATION **Ballroom Foyer**
New York, New York

Enlarged color photographs of common oral lesions of nutritional deficiencies including glossitis, cheilosis, gingivitis and others . . . as well as improvement following administration of complete vitamin therapy. Also, professional samples and literature on Vi-Syneral, Vi-Syneral Vitamin Drops, Vi-Syneral Injectable, Methisichol, Tri-Sulfanyl, Lipo-Heplex, Hypervitam and others.

THE UPJOHN COMPANY **Galeria Room**
Kalamazoo, Michigan

The Upjohn Company presents a new sympathomimetic agent Orthoxine for the prevention and treatment of Bronchial Asthma. Orthoxine is an orally effective chemical entity singularly specific as a bronchodilator and unusually free from side effects.

WALKER VITAMIN PRODUCTS, Inc. **Galeria Room**
Mount Vernon, New York

Protoplex will be featured at the Walker exhibit. This new product combines the proteins from casein, lactalbumin, yeast and liver in delicious cereal-like granules. Precalcin, the "dry-fill" capsules of vitamins and minerals for prenatal use, will also be shown along with the Hyvanol-Amvitol products for nerve deafness.

Other important therapeutic agents will also be on display.

WALTERS SURGICAL COMPANY

Los Angeles

Renaissance Room

Office equipment, short wave diathermy, E.K.G. apparatus, and instruments will be on display in Booth No. 26.

WESTINGHOUSE ELECTRIC CORPORATION

Los Angeles

Galeria Room

We intend to exhibit bank of illuminators and x-ray control equipment.

WESTWOOD PHARMACAL CORPORATION

Buffalo, New York

Ballroom Foyer

Westwood Pharmacal will display *Lowila*—a soap substitute (detergent), *Westhiazole Vaginal*—for trichomomas, and *Gentia-Jel*—for fungus infections of the vagina.

WHITE LABORATORIES, Inc. **Ballroom Foyer**
Newark, New Jersey

White's Dienestrol Tablets and Dienestrol Suspension (Council Accepted)—new orally effective synthetic estrogen is featured. Complete information and literature are available regarding the advantages of Dienestrol's high biologic activity, excellent patient-tolerance and economy.

Other products of White Laboratories, Inc. are on display and White's Medical Service Representatives in attendance will be pleased to supply any further information requested.

WINTHROP-STEARNS, Inc. **Renaissance Room**
New York, New York

Winthrop-Stearns, Inc., New York, extends a cordial invitation to visit its Booth No. 43, where representatives will be on hand to discuss the latest pharmaceutical contributions made by this firm. Featured will be Isuprel, new, more efficient and convenient bronchodilator; Demerol, powerful analgesic, spasmolytic and sedative; especially well suited for pre- and postoperative use.



PRE-CONVENTION REPORTS

Officers • Councilors • Committees • County Societies

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the Members of the California Medical Association and the House of Delegates:

This has been a memorable year for the California Medical Association. California medicine has been confronted for a long time with problems that to the rest of the United States seemed only a peculiarity of ours. They were blights or misfortunes that others were sincerely sorry for, in a jocular way, but they seemed not worry over them as a possible menace to themselves.

This year has shown that no area of our United States or even the world is immune to politically astute planners who deliberately destroy the things that they promise to their deluded listeners. After they have destroyed the things people most treasure, little benefit remains for the penitent public who have been bilked of their birthright. As an Englishman wrote me regarding English socialism and especially their National Health Service, "I think it would be true to say that most of us are completely disillusioned and that we are unpleasantly aware that we have let the side down and at the same time sacrificed our essential freedom for a security which is itself largely illusory. I hope sincerely that, if you people ever come to suffer from a wave of Utopian planners, you will realize the dangers in time, and that you will unite in absolute refusal to allow anyone to tamper with the freedoms of medicine."

To the medical profession has been given the leadership in fighting to preserve a high quality of medical care for the people. It so happens that by winning this battle we may by our example be able to awaken the people to the dangers that confront them which if not realized in time may destroy all other aspects of freedom that we hold most dear.

I have attempted to perform my duties during this past year in my office as your President. I bespeak for my successor your continued support.

May we continue our efforts and bring by a united profession the leadership that our country so sorely needs today.

Respectfully submitted,

E. VINCENT ASKEY, President

REPORT OF THE PRESIDENT-ELECT

To the President and the House of Delegates:

As President-Elect I have attended all the meetings of the Council and Executive Committee. I represented the C.M.A. at the Rural Health Conference in Sacramento. I visited the medical officers of the Oregon State Medical Society and had conferences with them. I also called upon the President-Elect of the Montana State Medical Association in Great Falls. I have visited several of the northern county medical societies during the year. I was guest speaker at the state meeting of the Grange. I attended the Stockton post-

graduate tenth annual session as a guest. I have served on several committees endeavoring to carry out the policies laid down by the C.M.A. Council.

Respectfully submitted,

R. STANLEY KNEESHAW, President-Elect

REPORT OF THE SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

"I heartily accept the motto—'That government is best which governs least'; and I should like to see it acted up to more rapidly and systematically. Carried out, it finally amounts to this, which also I believe—'That government is best which governs not at all'; and when men are prepared for it, that will be the kind of government which they will have."—Henry David Thoreau, 1817-1862.

A report covering any phase of the Association's activities for the year just past must necessarily record the fact that a large part of those activities has been occasioned by the constantly increasing threat of governmental domination. Just as in previous recent years, but to a greater extent than ever before, there have come the almost innumerable proposals that state or federal bodies, quasi-public agencies, or organized do-gooders take over large segments of the practice of medicine on the general theory that the American people are falling apart at the seams, and that of course the only remedy is to pass another law and to establish another bureau.

Is it not about time that we have done once and for all with defensive rear-guard action? Is it not indeed long past high time when we should call upon the forces of government to give an accounting of their stewardship over the fiscal and social affairs of the citizen during these past decades?

Historically, the record of government in the manipulation of the citizen's affairs is a sordid one, indeed. This can be duly documented and substantiated by references beginning with Hammurabi, the Babylonian, in 2285 B.C., and carried on down through Diocletian, the Roman, in 301 A.D., the Chinese New Dealers under Wong-An-Shih in 1068 A.D., the experiences of Robespierre and Marat in the French Revolution in 1789, down to date, to mention just a few of the outstanding examples. Governmental planning and control have always brought a precipitate drop in production, widespread black markets, and rampant corruption. Is it not reasonable that government be required to submit its accounts to an honest open audit rather than to disguise those accounts with fictitious bookkeeping subterfuge and all manner of hidden taxes designed to confuse and obfuscate?

American Medicine, like the American system of private enterprise, of which it is an integral part, is proud to stand upon its record of accomplishment for the people it

serves. Just as our system of private enterprise has given us the highest standard of living known today in terms of the essentials and comforts of life and made that standard available to a greater degree than achieved elsewhere in the world, so has American Medicine made the American people the healthiest people in the world today when comparable populations are considered.

Never before in the world's history have there been available so many different and effective media for the dissemination of facts. Your Association believes that if the people of California and of the country as a whole really know the facts about medical care, there will be no doubt about their choice of the manner in which that care is to be administered. Obviously, the attack on Medicine represents just one front of the attack upon every phase of our economy, and leaders in every walk of life are beginning to realize this fact. Medicine has a wonderful opportunity to lead the way in a return to the economy of sanity and abundance.

The chips are down. The stakes are not just marbles.

Respectfully submitted,
L. A. ALESEN, Speaker

REPORT OF THE VICE-SPEAKER

To the President and the House of Delegates:

The Vice-Speaker has attended all the meetings of the State Council and has carried out the special assignments, as designated by the Council and its officers.

The setting up of a pension plan for key employees of the Association has now been accomplished and is in operation. This has been carried out through a life insurance plan whereby the Association will be protected against the loss of a valuable employee. Funds from this insurance plan are available for the payment of pensions when the key employees arrive at the age of retirement.

Respectfully submitted,
DONALD A. CHARNOCK, Vice-Speaker

REPORT OF THE CHAIRMAN OF THE COUNCIL

To the President and the House of Delegates:

By the time the House of Delegates meets in May 1949, the Council will have finished another year.

The new members of the Council, elected in 1948, have been present at all meetings of the Council to date.

The work of the Council has this year been heavier than usual in that many items of business which necessitated a great deal of work have come up during the year. The advice of the Council was needed on the work being done by the advisory committee to the State Department of Public Health on the chronic disease situation, and a good many hours of the Council's time were devoted to this purpose. Discussion of many other important reports from other committees or commissions of the Council have necessitated large amounts of time. Such reports would include the report of the Cancer Commission; the report of the Committee on Alcoholism; the Blood Bank Commission, and many others, all of which have done a splendid piece of work during the year.

As Chairman of the Council I am very happy to report that there seems to be a spirit of unity and cohesion throughout the state that has not been equalled before.

At the time of the writing of this report, the campaign of the American Medical Association against compulsory health insurance on a federal basis is just starting, and it is hoped that, with the impetus that will be given to it by the Cali-

fornia members who are on these committees, the campaign will be successful.

It is the desire of the Chairman of the Council at this time to thank all members of the Council for the amount of time, effort and thought that has been put into the work that the Council has done, and it is likewise the Chairman's desire to thank again those in the office of the California Medical Association for their complete cooperation and effort.

Respectfully submitted,
EDWIN L. BRUCK, *Chairman of the Council*

Report of the Council

To the President and the House of Delegates:

The Council has held six meetings since the close of the 1948 House of Delegates sessions. These were held on April 14 (for organization purposes), June 5-6, August 21-22, October 30-31 and December 18-19, 1948, and March 5-6, 1949. Additional meetings will be held prior to the start of the 1949 Annual Session and, under constitutional provisions, each day during the Annual Session.

Minutes of the Council meetings have been printed in CALIFORNIA MEDICINE following each meeting.

It is to be noted that all Council meetings during the year are now held on week-ends and for a period of two days. The volume of work appearing on the agenda for each meeting is so heavy that shorter sessions are not feasible. In addition, the Council reviews the actions of the Executive Committee, which holds meetings between the sessions of the Council and serves to make determinations of policy on short notice, where Council meetings would not be practicable.

As a part of this report the Council digests some of the major items which have been dealt with during the past year. Any additional items which may appear prior to the Annual Session will be reviewed in a supplemental report to the House of Delegates.

1. Organization:

The Council is pleased to report that a Southern California office has been opened, located in the Subway Terminal Building, Los Angeles, and that Mr. Ed Clancy has been appointed Field Secretary in charge of this office. The Los Angeles office has operated well within the budget assigned to it and Mr. Clancy has at all times been available to visit county societies to assist in their problems and to counsel with their officers on matters of public relations, public policy and related items. The operation of the Los Angeles office has been a decided benefit to members of the Association in the southern counties and has served to provide a more direct and more rapid service to members and county societies in that area.

2. Membership of Association:

Membership in the Association reached a new record high at the close of 1948, with 9,240 active members listed. At the year-end there were 455 members shown on the records as delinquent, an unusually high number which the Council wishes to point out as representing an accumulation of lapsed memberships following the termination of the war. During the war years many members who served in the armed forces determined to establish themselves in other areas upon their return to civilian life and the large number of delinquent members at the end of the year reflects the accumulation of five years in this respect. Currently the membership of the Association is at a new record high and has reached the point where the Association is now entitled

to ten, rather than nine, Delegates to the American Medical Association.

3. Committee on Constitution and By-Laws:

In accordance with a vote of the 1948 House of Delegates, the Council appointed a committee of five members to review the Constitution and By-Laws. This committee has met during the year and, it is understood, will bring in its report to the 1949 House of Delegates. Thereafter the members of the House of Delegates will have the opportunity to vote on any recommendations made.

4. Committee on Crippled Children's Act:

The Council also appointed a committee to investigate the authority and operations of the Crippled Children's Bureau, in accordance with a decision of the 1948 House of Delegates. This committee has also met and will bring in its report to the next meeting of the House of Delegates.

5. Industrial Fees:

The Council has reviewed the recommendations of the Committee on Industrial Practice and has approved a proposed schedule of fees for compensation cases prepared by that committee. On September 1, 1948, the Association petitioned the Industrial Accident Commission of the State of California to adopt this proposed schedule of fees. Thereafter, on November 8-10, 1948, the Industrial Accident Commission adopted a resolution which (1) tabled the Association's request for adoption of a revised fee schedule, (2) stated the Commission's belief that it had no direct statutory authority to promulgate and enforce a schedule of medical and surgical fees, (3) suggested that the medical profession or the insurance interests introduce legislation to give the Commission this authority, and (4) stated that the existing fee schedule would be recognized only until June 30, 1949. Thereafter the Council voted to recommend to all members of the Association that the proposed fee schedule be made effective for all services performed on or after February 1, 1949.

Following this notification to members, the insurance interests writing the bulk of compensation insurance in California voted to recognize only the previous schedule of fees and suggested that a committee of insurance men and a similar committee from the Association meet to attempt to work out a fee schedule which could be recognized as a minimum by both parties. Such a committee has been appointed by the Council and it is hoped that a speedy solution to this problem may be worked out. Meanwhile, the great bulk of the membership has expressed itself as favoring the proposed fees.

6. State Department of Public Health:

The Council has been pleased to have the State Director of Public Health as a guest at its meetings during the past year. Among other items which have been discussed in the field of public health are the approval of a proposed mass chest survey for tuberculosis by the U. S. Public Health Service in four metropolitan areas and approval of a study of chronic diseases made by the Department of Public Health with the cooperation of advisory committees on which the Association was represented.

7. American Public Health Association:

The Council appointed a representative to attend the annual meeting of the American Public Health Association, at which it was voted to create a Section on Medical Care. Attention is called to the existence of this section, particu-

larly since it may be employed as a means of advancing theories leading toward the establishment of tax-supported systems of medical care.

8. Veterans' Administration:

The Council adopted two resolutions bearing on the Veterans' Administration, one of them decrying the establishment of regional or subregional diagnostic and/or treatment centers in areas where the services of physicians are already available and the other calling attention to the fact that the admission of non-service connected disability cases to Veterans' Hospitals and, through contract, to Army and Navy hospitals was causing an undue demand to be made on the medical staffs of the Veterans' Administration and the armed forces. Copies of these resolutions were forwarded to Government officials and it is interesting to note that some of the items complained of in these actions have been given further notice in the preliminary reports of the Hoover Commission on Governmental Reorganization in the Executive Departments.

9. Public Policy and Legislation:

The Council wishes to call attention to the fact that the present session of the State Legislature is faced with almost 5,000 measures, the largest number ever introduced in any state legislative body. Many of these bills would tend to permit practices by members of some healing arts groups which do not qualify by training and experience to provide such services to the public. The Council expresses grave concern over the attempts of certain groups to obtain a foothold through legislative action in fields for which their members are not trained or qualified and where public harm may result.

Compulsory health insurance is again before the Legislature in bills introduced on behalf of Governor Warren and the State Federation of Labor, A. F. of L. The Association will continue to oppose these measures.

The thanks of the Council and of the Association are hereby extended to Dr. Dwight H. Murray, Chairman of the Committee on Public Policy and Legislation, for his untiring efforts to look after the best interests of the public and the medical profession in directing the Association's activities in this field. Mr. Ben Read, Executive Secretary of the Public Health League of California, and Mr. Ed Clancy, C.M.A. Field Secretary, have also given valuable help in this endeavor.

10. Public Relations:

The Council has given continuing approval to the work of the Committee on Medical Economics in working toward establishment of a program of individual public relations for members in their dealings with their patients. Approval has been given to a pamphlet aimed at this objective and planned for distribution to all members; further studies are under way by this committee and will be given full consideration when ready.

In addition, the Council has approved a continuation of the radio program, *California Caravan*, which has been operating for several years. This now constitutes the only direct public relations activity of the Association in the field of an appeal to the public. The American Medical Association has recently adopted a program of public relations which will probably replace, to a large extent, the individual programs of the various state associations and in which the California Medical Association will have its own part to play. Two Californians have been appointed to the nationwide committee to supervise this program and one, Dr. John W. Cline, has been named as one of three members of the A.M.A. House of Delegates to sit with

members of the A.M.A. Board of Trustees and officers as a Coordinating Committee to make policy for this program. The A.M.A. plan is being financed by an assessment of \$25 against each of its members and it is gratifying to report that the physicians of California have been prompt in meeting this request, the first appeal for funds made by the A.M.A. in its 102 years of existence.

As an added item, the Council has approved the distribution to all high school, junior college and college libraries in California of copies of the Brookings Institution report on "The Issue of Compulsory Health Insurance." This volume constitutes one of the few available works representing an objective study of this matter and not produced as a propaganda piece; the libraries of the schools have been grateful to receive this study for their permanent records.

11. California Physicians' Service:

The Council has maintained its practice of inviting representatives of C.P.S. to attend Council meetings and to participate in discussion of appropriate items. A more thorough understanding of C.P.S. has resulted from this practice and such participation is continuing. Among the principal items approved by the Council during the past year was the request that the Board of Trustees of C.P.S. provide for a thorough review of the entire schedule of fees by the special fee schedule committee created by action of the House of Delegates in 1946. It is understood that such a review has been undertaken by this committee and that a report will be made to the Administrative Members of C.P.S. at their meeting during the Association's Annual Session.

12. Model Radiology Contract for Hospitals:

During the past year the State Attorney General ruled that hospitals might not employ physicians to provide medical services on a basis which would return a profit to the hospitals. In order to continue the services of radiologists, pathologists and anesthesiologists where such physicians were practising in hospitals, the Council authorized the drafting of a model contract which would preserve the identity of the physician and continue his services to patients in the hospitals. While drawn primarily for radiologists, this proposed model contract is amenable to changes to make it applicable to physicians in any field of practice. This contract has been approved by the Council and is now in process of being put into effect in several hospitals.

13. California Ambulance Association:

The Council has been pleased to appoint Dr. Eugene F. Hoffman as its representative to sit with the board of the newly formed California Ambulance Association, an organization devoted to improving standards among ambulance operators. This organization has expressed its desire to establish standards which will meet with the approval of physicians for the care of their patients.

14. Cancer Commission:

The Council wishes to express its thanks and commendation to the members of the Cancer Commission for their continuing efforts in behalf of high professional standards in the detection and treatment of cancer. The Cancer Commission has maintained a splendid liaison with the American Cancer Society, has produced a film for professional education in cancer detection and has progressed in its work of establishing and supervising consultative tumor boards and cancer clinics. These activities have been of great benefit to the public and the profession alike.

15. California Medicine:

The Council wishes again to pay tribute to the Editor, Dr. Dwight L. Wilbur, for his splendid contribution in improving the standards of the official journal, CALIFORNIA MEDICINE. The journal has received nationwide acclaim for its excellence and the editor and his assistant are due a full measure of credit for this improved stature.

Thanks and commendation are also due to the Committee on Advertising, which screens all proposed advertising of products or services not already holding national recognition. The able efforts of this committee have borne fruit in the recognition of the journal as a preferred advertising medium open to those products or services which meet minimum standards of a high order. The profession in California is aided immeasurably by these activities.

16. Conclusion:

The Council wishes to pay tribute and express thanks to all committee members who have served during the past year. Some committees find few if any calls for their services but all are prepared on request to take appropriate action and to devote the time and effort necessary to reach the proper solution to problems facing the Association. Especially are thanks due to the Secretary, Dr. L. Henry Garland, who has served without compensation for the past two years and whose contributions to the Association cannot be measured.

Respectfully submitted,

EDWIN L. BRUCK, *Chairman of the Council*

REPORT OF THE PRESIDENT OF THE TRUSTEES OF THE C.M.A.

To the President and the House of Delegates:

The Trustees of the California Medical Association is a wholly-owned affiliate of the California Medical Association, the members of which are the members of the Council of the Association. The corporation holds meetings for the transaction of necessary business only and in the fiscal year ended June 30, 1948, such business was routine only. The financial report of the corporation is shown as a part of the report of the Treasurer of the Association, who also serves as Treasurer of the Trustees of the California Medical Association.

Respectfully submitted,

E. VINCENT ASKEY, *President*

REPORT OF THE SECRETARY

To the President and the House of Delegates:

Your Secretary has attended the meetings of the Council and the Executive Committee during the past year, in addition to many of the meetings of the Committee on Post-graduate Activities, the Legislative Committee, the Committee on Scientific Work and similar bodies appointed by the House. His main function has been with the Committee on Scientific Work, a report of which may be found elsewhere in this issue.

The minutes of the Council meetings, ably prepared by the Executive Secretary, should be read by all members.

At the termination of the 1948 Annual Session your Secretary regretfully felt compelled to tender his resignation, owing to the press of many duties (including those connected with practice, with presidency of the Radiological Society of North America, with a teaching position on the staff of a medical school, and so forth). He expressed the suggestion that the secretaryship of a large and important state organization such as ours requires the unrestricted

attention of a physician, at least half-time. The Council graciously accepted the resignation, but requested him to serve as acting Secretary until a replacement was appointed. This it has been his privilege to do.

Sincere thanks are owed the officers of the Association and the staff of the Association's office for their cooperation and assistance during the year, especially Mr. Hunton, Mr. Wheeler and Mrs. Rooney.

Respectfully submitted,

L. HENRY GARLAND, *Secretary*

REPORT OF LEGAL DEPARTMENT

To the President and the House of Delegates:

The Legal Department submits the following report covering the period from the last session of the House of Delegates to mid-February, 1949, the time of preparation of this report:

During the past year, we have attended all meetings of the Council, meetings of the Executive Committee, and various meetings of standing committees and other agencies of the Association. We have also prepared and rendered opinions on a variety of subjects, as requested by the Association or its officers or component societies.

In addition to our ordinary and regular services, we have also undertaken the following:

(a) As amici curiae we prepared and filed a brief before the California Supreme Court in the case of *Sinz versus Owens*. This case, which has not as yet been decided by the Supreme Court, involves two very important questions of law: First, whether a physician from one community may testify in a malpractice action against a physician in an entirely different community; second, whether a general practitioner is to be held to the degree of skill and care of a specialist if he undertakes to perform services in a field in which there is a specialist available in the community. With respect to the second issue, it has always been the law that a general practitioner is only held to the degree of skill and care of other general practitioners in the community, *unless he holds himself out as a specialist*. In the Owens case the physician concerned did not represent himself to be a specialist.

(b) We have conducted extended negotiations over a period of approximately nine months with the legal counsel for the Association of California Hospitals in an effort to arrive at a mutually satisfactory model contract form for use by hospitals and radiologists, and hospitals and pathologists. The fundamental objective to be attained is the settlement of the status of radiologists and pathologists in performing services in hospitals in a manner that is practical and that at the same time will not involve corporate practice of medicine on the part of the hospital or aiding and abetting unlawful practice on the part of the radiologist or pathologist. At the present time the model form of contract for hospitals and radiologists has been approved by the Council of the California Medical Association and is awaiting action by the Association of California Hospitals. The hospital-pathologist contract is almost complete, but there are still a few details that have not been satisfactorily solved. If a model form could be achieved it would, we believe, tend to remove one cause of friction between hospitals and physicians that has existed for many years. It would be a tremendous step forward in an effort to achieve solidarity and unanimity within the medical profession and its allied interests.

(c) We have assisted the Committee on Industrial Practice and the Executive Secretary in connection with the presentation to the Industrial Accident Commission of a revised fee schedule, and at meetings before that body.

(d) We have assisted the special committee appointed last year to review the proposed new Constitution and By-Laws, and have devoted considerable time to work with that committee.

There have been a number of other services performed by the Legal Department in connection with legislation and allied matters, which will be reported to the House of Delegates at its 1949 session.

We wish to reiterate our constant desire to serve the medical profession to the best of our ability.

Respectfully submitted,

PEART, BARATY & HASSARD, *General Counsel*

REPORT OF THE EDITOR

To the President and the House of Delegates:

As part of a continuing effort to make CALIFORNIA MEDICINE a more useful and readable journal for subscribers, several physical changes were made during the past year. To please the eye, the style of type used for the titles of articles was changed so that it now has kinship to the type face in which the text is cast. Subtitles in smaller type have been used to avoid the tedium of long headings in one large type face, and yet preserve a fully expressive title for indexing purposes.

Starting with the January 1949 issue, summaries have been printed at the beginning rather than at the end of articles, a departure that has been gratifyingly approved by all who have expressed an opinion to the editorial office.

Because so many of the manuscripts submitted are properly case reports, a separate section was established for their publication, in the interest of departmentalization for the greater convenience of readers.

That the journal might be more generally reflective of the practice of medicine in California, particular effort has been made to publish worthwhile articles written by physicians outside the metropolitan areas and the centers of medical teaching.

Although the number of articles printed in 1948 was considerably larger than the total for the preceding year—180 as compared with 110—a major editorial task again was that of selection. Because the number of manuscripts not originating from the Annual Session of the California Medical Association continued to increase, the total available for consideration was greater in the past year than in the preceding period. In the winnowing process a large part of the burden fell upon the members of the Editorial Board, whose great assistance in a necessarily cumbersome system of reviewing manuscripts by correspondence is gratefully acknowledged. Their tasks, and those of the editor too, were made the greater by the death last January of Dr. Lambert B. Coblenz, whose personality and judgment were a cogent influence in the executive committee of the Editorial Board.

The editor's thanks go also to Drs. Edgar Wayburn and Clarence J. Berne for handling the considerable difficulties of getting and editing material for the Clinical Symposium section, to those physicians who have written book reviews and other material upon assignment, to the office staff of the journal, and to the many others who have toiled for the purposes of CALIFORNIA MEDICINE. Particular reference should be made to the continued excellent services rendered by Robert F. Edwards, assistant to the editor, in handling much of the detail of producing the journal.

Respectfully submitted,

DWIGHT L. WILBUR,
Editor, CALIFORNIA MEDICINE.

REPORT OF THE EXECUTIVE SECRETARY

To the President and the House of Delegates:

The report of the Executive Secretary is presented, as in the past, in a series of sections devoted to his several duties. It is hoped that this form will be convenient for the House of Delegates and its reference committee which will consider this report.

1. *General.* The office of the Association is in the same location and of the same area as a year ago. The office personnel also remains unchanged at three men and five women employees in addition to the Executive Secretary. Office equipment has been well maintained and replacements made as part of a program designed to keep all equipment in an up-to-date condition to serve the needs of the organization. Latest additions in the line of equipment are an electric typewriter for multiple-copy and stencil work and a new Addressograph to handle journal and other mailings. The latter is the most expensive piece of machinery in the office and replaces an earlier model which had served for some fifteen years; the new machine is considerably more efficient than the old model and its cost will be somewhat offset, indirectly, in its increased output.

The office is maintained not only as a place of business but as a center of service for members of the Association and for all physicians seeking aid in any of a number of matters. Office policy is to extend every possible assistance to all physicians and this policy has been maintained in the past year. The door is always open.

2. *Meetings.* The Executive Secretary has attended all meetings of the Council and the Executive Committee and has drafted the minutes of each. He has presided over all meetings of the Advisory Planning Committee and has attended meetings of the Committee on Advertising, Committee on Industrial Medicine and other standing and special committees. He has served as secretary, by request, of the Committee on Constitution and By-Laws. He has also served as an aide to the Association's delegation to the American Medical Association and has attended the annual and interim sessions of the A.M.A. In addition, he has served as executive secretary of The United Public Health League and in the year just past as secretary-treasurer of The Conference of Presidents and Other Officers of State Medical Associations. He has been pleased to cooperate with the Editor in the preparation and conduct of the Annual Conference of Secretaries and Editors of State Medical Associations, sponsored by the A.M.A.

The Executive Secretary has also appeared on the programs of several county medical societies, by invitation, and as a guest speaker before several service clubs or civic organizations and one national trade association group. His appearances also include representation of the Association before the Industrial Accident Commission of the State of California and before committees of the State Legislature.

3. *Financial.* The finances of the Association, conduct of which is delegated to the Executive Secretary by the Council, have continued to show improvement during the past year. A complete financial report for the fiscal year ended June 30, 1948, is shown under the report of the Treasurer and repetition is not required here. Suffice it to say that the budget adopted by the House of Delegates has been faithfully followed and that expenditures were well within the budgetary allowances, that the excess of receipts over expenditures for the June 30, 1948, fiscal year was \$198,930 for the Association and \$18,659 for the Trustees of the California Medical Association, and that the holdings of U. S. Government securities were increased by \$200,000 during calendar year 1948. The Association has ample cash on hand or in short-term Government bills to meet all budg-

eted and foreseeable obligations. Expenditures for public relations purposes have been considerably decreased from the preceding two years' level and the dues of members have declined from a level of \$100 in 1947 to \$60 in 1948 and \$50 in 1949. The reduced level of dues has provided sufficient funds to take care of the Association's growing activities and needs and to allow an accumulation of surplus for purposes to be determined by future meetings of the official bodies of the Association.

CALIFORNIA MEDICINE, the official journal, was rearranged financially during 1948 through the inauguration of a strict cost-accounting system. Under this arrangement the journal is charged with rent, all clerical salaries, and all direct purchases and obligations, and is credited with the \$3 per year per member subscription rate required by postal regulations. This accounting system for the final six months of 1948 indicates that the journal will pay its own way, financially, for the 1949 fiscal year and will probably return a modest profit. Journal expenses have been rising steadily in the past four years, sometimes at an alarming rate, but in recent months there have been indications that some major items of expense, notably printing, have leveled off or actually declined.

Every attempt is being made to keep the journal expenses within the budget and to conserve journal finances as much as possible, consistent with production of a high-grade publication which will be not only of service but a source of pride to the members of the Association. The policy of the Council and the House of Delegates has been to bring out a worthy scientific publication and not to strive for profits. In this connection it is to be noted that the journal pays no commissions to any employee of the Association, the only commission deducted from gross advertising revenues being the commission regularly allowed to recognized advertising agencies by general and special publications throughout the country. All expenses of the journal are now segregated and all revenues credited, so that the financial showing which will appear in forthcoming audited reports will represent the actual results of a business enterprise carried on within the organizational limits of the Association.

4. *California Medicine.* The paragraph above makes comment on the financial and policy aspects of the official journal. Operational considerations include public acceptance of the journal, advertising solicitation and screening, and general policy items for future consideration.

In the public eye, it is safe to say that CALIFORNIA MEDICINE is continuing to gain in stature. The journal is being quoted with greater regularity and is receiving an increasing number of complimentary remarks which attest the able manner in which it is edited. Dr. Wilbur, as editor, was honored last year by appointment as chairman of the planning committee and presiding officer at the Annual Conference of Secretaries and Editors of State Medical Associations, sponsored by the American Medical Association. The editor has followed a policy of constantly considering changes in format, presentation and origin of editorial material, so that the journal does not remain static but stretches at all times to become more useful to its readers.

Advertising solicitation continues under the program reported last year, under the direction of an advertising manager. All new advertising material comes under the scrutiny of an advertising committee, which screens all products and advertising copy, accepting that which meets specified minimum standards and rejecting that which is considered substandard. This committee has been completely diligent and careful in its work and has been effective in setting up advanced standards of medical advertising for numerous national advertisers. The Executive Secretary sits with this committee as liaison between the committee and the Council.

5. *Committee on Industrial Practice.* The Executive Secretary has met with the Committee on Industrial Practice in its work on preparation and establishment of an up-to-date adequate schedule of fees for medical and surgical services in industrial accident cases. A similar schedule was prepared in 1942 and, after a protracted series of meetings, conferences and compromises, was put into effect by the Industrial Accident Commission of the State of California on November 1, 1946. The Committee in 1948 sought to bring this schedule up to date; it prepared a proposed new schedule, which was approved by numerous medical and surgical specialty groups and by the Council of the Association. This schedule was presented to the Industrial Accident Commission on September 1, 1948, and the Commission tabled the petition for adoption of the proposed new fee schedule on the ground that the Commission lacked specific legal authority to make and enforce such a schedule. The Council of the Association thereafter approved the mailing of the proposed schedule to all members, with the suggestion that the proposed fees be put into effect February 1, 1949. The Executive Secretary has been engaged in this program throughout and will continue to carry out his instructions in furtherance of the Council's decisions.

6. *Public Policy and Legislation.* The Executive Secretary has been pleased to give every possible assistance to the Committee on Public Policy and Legislation. This is a legislative year and from the mass of proposed legislation offered in the opening weeks of the State Legislature, it appears there will be a large amount of work required in the months to come.

7. *Public Relations.* This activity was handled again in 1948 by outside public relations counsel, although additional work has been done within the structure of the Association. Through the studies of the Committee on Medical Economics, in which the Advisory Planning Committee has cooperated, it is hoped that a statewide plan of public relations for individual physicians may be worked out in the near future.

8. *Advisory Planning Committee.* The Executive Secretary continues to serve as chairman of the Advisory Planning Committee, a brief report of which is found elsewhere in this issue of the journal. This committee has continued to give consideration to a variety of matters for the betterment of the Association and its component units, subject at all times to the wishes of the Council in putting suggested programs into effect.

9. *Annual Session.* Plans are now well under way for the 1949 Annual Session. The technical exhibit this year will be larger than ever and a start will be made toward the reestablishment of scientific exhibits and medical motion pictures.

10. *Conclusion.* The Executive Secretary wishes here to express his sincere thanks to the members of the Association, the officers and committeemen, and all others with whom he has had the opportunity of working in the past year. Special thanks go to the elected officers and Councilors, under whose direct supervision the Executive Secretary performs his duties. The Council has at all times been extremely cooperative, instructive and helpful and the work of the office has been materially aided thereby. The same applies to the Secretary and the Editor, appointed officers, with whom the writer enjoys most cordial working relationships. The cooperative attitude of all these makes the work of the office not only more effective but a pleasure.

To the office staff, thanks are also due from the Executive Secretary and the Association as a whole. Loyal, efficient and friendly staff members contribute greatly to smooth operations, and this type of service is gratefully recognized.

Respectfully submitted,
JOHN HUNTON, *Executive Secretary*

REPORT OF THE TREASURER

To the President and the House of Delegates:

The duties of the Treasurer of the Association are nominal only, the actual duties of the office being performed by the office staff and the audit of accounts by an independent certified public accountant. In his annual audit, the independent accountant checks the receipt and expenditure of all funds, verifies the appropriations for specific purposes by reference to the budget adopted by the House of Delegates and resolutions adopted by the Council, and certifies the presence of cash, securities and other assets shown in the final report.

Submitted herewith is a series of accounts prepared by Hood & Strong, Certified Public Accountants, covering receipts and disbursements of funds for the fiscal year July 1, 1947, to June 30, 1948. These accounts reflect the transactions of the California Medical Association and the Trustees of the California Medical Association, the corporate holding company established by the Association some years ago to hold reserves accumulated by the Association. The tables show income and expense accounts of both organizations, balance sheets of both as of June 30, 1948, and a combined balance sheet of both as of the close of the fiscal year. Members are urged to study both sets of accounts for a true picture of the Association's financial position. The corporation is wholly owned by the Association.

Respectfully submitted,
L. HENRY GARLAND, *Treasurer*

(Balance sheets and statements of income and expenditures appear on following pages.)

CALIFORNIA MEDICAL ASSOCIATION
San Francisco, California

STATEMENT OF INCOME AND EXPENDITURE
Comparative for Years Ended June 30, 1947 and June 30, 1948

INCOME		Year Ended		Increase (Decrease)
		June 30, 1947	June 30, 1948	
DUES AND GENERAL:				
Membership Dues—Less Portion Allocated to Journal Subscriptions		\$798,225.50	\$531,607.00	(\$266,618.50)
Exhibitors at Annual Meeting		11,845.00	12,010.00	165.00
Interest Earned		3,674.71	7.53	(3,667.18)
Miscellaneous			56.72	56.72
		<u>\$813,745.21</u>	<u>\$543,681.25</u>	(\$270,063.96)
OFFICIAL JOURNAL—“California Medicine”:				
Advertising		\$ 71,923.54	\$ 67,502.76	(\$ 4,420.78)
Members' Subscriptions—Allocated from Dues		24,687.00	27,978.00	3,291.00
Cash Subscriptions		1,598.80	1,759.70	160.90
Reprints			367.64	367.64
		<u>\$ 98,209.34</u>	<u>\$ 97,608.10</u>	(\$ 601.24)
TOTAL INCOME		<u>\$911,954.55</u>	<u>\$641,289.35</u>	(\$270,665.20)
EXPENDITURE				
Administration		\$106,880.19	\$121,578.66	\$ 14,698.47
Scientific, Educational and Public Relations		288,795.44	232,229.05	(56,566.39)
Official Journal “California Medicine”		83,047.97	88,551.52	5,503.55
TOTAL EXPENDITURE		<u>\$478,723.60</u>	<u>\$442,359.23</u>	(\$ 36,364.37)
EXCESS OF INCOME OVER EXPENDITURE		<u>\$433,230.95</u>	<u>\$198,930.12</u>	(\$234,300.83)

CALIFORNIA MEDICAL ASSOCIATION
San Francisco, California

STATEMENT OF EXPENDITURE

Comparative for Years Ended June 30, 1947 and June 30, 1948

		Year Ended	Increase (Decrease)	
		June 30, 1947	June 30, 1948	
ADMINISTRATION:				
Salary—Executive Secretary		\$ 12,333.32	\$ 14,333.26	\$ 1,999.94
Salaries—Administration		3,660.00	4,925.00	1,265.00
Salaries—Clerical		9,649.71	12,464.37	2,814.66
Traveling:				
Executive Secretary—Secretary		396.81	1,329.80	932.99
Officers		55.06	579.43	524.37
Council		3,864.46	4,566.50	702.04
Executive Committee		415.59	304.87	(110.72)
Delegates to A.M.A.		13,666.15	10,300.85	(3,365.30)
Taxes—Social Security		606.02	465.45	(140.57)
Annual Meeting Expense		12,567.12	19,946.12	6,379.00
Legal Expense:				
Retainer Fee		6,000.00	6,000.00	
Other Legal Expense		5,204.38	3,631.87	(1,572.51)
Pensions		4,740.00	4,740.00	
Office Equipment Purchased		3,055.14	2,102.47	(952.67)
Rent		6,188.85	6,771.11	582.26
Office Supplies and Expense		3,619.22	3,228.21	(391.01)
Postage		482.33	484.48	2.15
Telephone and Telegraph		1,163.02	2,207.04	1,044.02
Council and Executive Committee Expense		2,000.69	2,208.64	207.95
Contributions to United Public Health League		15,169.11	20,119.56	4,950.45
Miscellaneous		293.21	119.63	(173.58)
Woman's Auxiliary		750.00	750.00	
		<u>\$106,880.19</u>	<u>\$121,578.66</u>	\$ 14,698.47
SCIENTIFIC, EDUCATIONAL AND PUBLIC RELATIONS:				
Department of Public Relations		\$178,863.12	\$160,636.63	(\$ 18,226.49)
Public Policy and Legislation		46,971.24	39,625.97	(7,345.27)
Department of Public Relations—C.P.S.		44,342.36		(44,342.36)
Physicians Benevolence		8,120.00	9,512.00	1,392.00
Postgraduate Activities		111.50	4,956.46	4,844.96
Cancer Commission		2,681.27	5,721.95	3,040.68
Other Committee Activities		3,645.95	4,693.08	1,047.13
Medical Economics		4,060.00	2,326.96	2,326.96
Subscriptions to Libraries			4,756.00	696.00
		<u>\$288,795.44</u>	<u>\$232,229.05</u>	(\$ 56,566.39)
OFFICIAL JOURNAL—“California Medicine”:				
Production Expense		\$ 71,467.00	\$ 74,432.03	\$ 2,965.03
Selling Expense		4,952.74	6,360.93	1,408.19
Postage, Wrapping and Mailing		3,537.02	4,377.34	840.32
Illustrations		1,165.94	1,218.85	52.91
Supplies and Office Expense		1,314.08	1,342.98	28.90
Discounts and Collection Expense		264.15	819.39	555.24
Reprints		347.04		(347.04)
		<u>\$ 83,047.97</u>	<u>\$ 88,551.52</u>	\$ 5,503.55
TOTAL EXPENDITURE		<u>\$478,723.60</u>	<u>\$442,359.23</u>	(\$ 36,364.37)

CALIFORNIA MEDICAL ASSOCIATION

San Francisco, California

BALANCE SHEET—JUNE 30, 1948

ASSETS

CASH						
In Banks						
Commercial Accounts	\$280,741.66					
Savings Accounts	621.30					
On Hand	1,281.25					
Petty Cash Fund	36.04					
ACCOUNTS RECEIVABLE						
Journal Advertisers—Total	1,212.39					
Less Reserve for Doubtful Accounts	500.00					
	712.39					
State of California—Department of Public Health	5,836.66					
Miscellaneous	1,171.49					
LOAN RECEIVABLE						0.00
New Mexico Physicians Service:						
Total	17,500.00					
Less Reserve	17,500.00					
TRUST FUNDS						12,128.16
Morris Herzstein Bequest	4,033.32					
Benevolence Fund	8,094.84					
FURNITURE AND FIXTURES—Nominal Value						1.00
DEFERRED CHARGES						761.05
Prepaid Rent	539.03					
Prepaid Postage	222.02					
DEPOSITS						625.00
United Air Lines	425.00					
Post Office	200.00					
						\$303,916.00

LIABILITIES

ACCOUNTS PAYABLE						
Journal Production—Accrued Expense	\$ 5,303.23					
Other Accrued Expense	6,775.04					
American Cancer Society	2,564.48					
County Societies	690.00					
Collector of Internal Revenue	1,060.69					
TRUST ACCOUNTS						12,128.16
Unexpended Balance of Income Received under Morris Herzstein Bequest	4,033.32					
Benevolence Fund	8,094.84					
SURPLUS						275,394.40
						<u>\$303,916.00</u>

TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION (A CORPORATION)

San Francisco, California

STATEMENT OF INCOME AND EXPENDITURE

Comparative for the Years Ended June 30, 1947 and June 30, 1948

INCOME	Year Ended		Increase (Decrease)
	June 30, 1947	June 30, 1948	
Interest on Bonds	\$ 3,110.23	\$ 18,773.80	\$ 15,663.57
Interest on Savings Accounts	70.53	100.60	30.07
Miscellaneous	1.00	40.00	39.00
TOTAL INCOME	\$ 3,181.76	\$ 18,914.40	\$ 15,732.64
EXPENDITURE			
Premium on Bonds purchased			
Audit Fee	\$ 126.00	\$ 130.00	\$ 3.75
Miscellaneous	31.00	31.00	4.00
TOTAL EXPENDITURE	\$ 157.00	\$ 254.75	\$ 97.75
EXCESS OF INCOME OVER EXPENDITURE	\$ 3,024.76	\$ 18,659.65	\$ 15,634.89

CALIFORNIA MEDICAL ASSOCIATION
AND
TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION (A CORPORATION)
San Francisco, California

COMBINED AND COMPARATIVE BALANCE SHEETS

ASSETS	California Medical Association	California Medical Association	Combined June 30, 1948	Combined June 30, 1947	Increase (Decrease)
Cash	\$282,680.25	\$ 4,996.63	\$ 287,676.88	\$ 253,090.45	\$ 34,586.43
Marketable Securities		865,000.00	865,000.00	700,000.00	165,000.00
Accounts Receivable	7,720.54	9,840.62	17,561.16	13,752.25	3,808.91
Loan Receivable	17,500.00		17,500.00	10,500.00	7,000.00
Endowment Fund		268.62	268.62	264.98	3.64
Benevolence Fund	8,094.84	22,317.25	30,412.09	22,094.05	8,318.04
Trust Fund	4,033.32		4,033.32	3,859.84	173.48
Furniture, Equipment, Etc.	1.00		1.00	1.00	
Deferred Charges	761.05		761.05	850.49	(89.44)
Deposits	625.00		625.00	425.00	200.00
	\$321,416.00	\$902,423.12	\$1,223,839.12	\$1,004,838.06	\$219,001.06
LIABILITIES—RESERVES AND SURPLUS					
Accounts Payable	\$ 16,393.44		\$ 16,393.44	\$ 23,008.56	(\$ 6,615.12)
Members' Contribution to Endowment Fund		\$ 268.62	268.62	264.98	3.64
Benevolence Fund	8,094.84	22,317.25	30,412.09	22,094.05	8,318.04
Trust Account	4,033.32		4,033.32	3,859.84	173.48
Reserve for Loan Receivable	17,500.00		17,500.00	10,500.00	7,000.00
Surplus	275,394.40	879,837.25	1,155,231.65	945,110.63	210,121.02
	\$321,416.00	\$902,423.12	\$1,223,839.12	\$1,004,838.06	\$219,001.06

TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION (A CORPORATION)

San Francisco, California

BALANCE SHEET—JUNE 30, 1948

ASSETS			
CASH			\$ 4,996.63
Commercial Account			
Bank of America, N. T. & S. A.	\$ 981.88		
Savings Accounts		4,014.75	
Bank of America, N. T. & S. A.	1,274.37		
American Trust Company	1,492.37		
Wells Fargo Bank & Union Trust Co.	1,248.01		
BOND INTEREST COUPONS DUE AND ON HAND			9,840.62
INVESTMENTS			865,000.00
U. S. Government Bonds at maturity value		865,000.00	
ENDOWMENT FUND			268.62
Bank of America, N. T. & S. A., Savings		268.62	
BENEVOLENCE FUND			22,317.25
Crocker First National Bank, Savings		22,317.25	\$902,423.12
LIABILITIES AND SURPLUS			
MEMBERS' CONTRIBUTION TO ENDOWMENT FUND		\$ 268.62	
BENEVOLENCE FUND		22,317.25	\$ 22,585.87
SURPLUS			879,837.25
Representing the amount by which the Total Assets exceed the Liabilities as of June 30, 1948:			
Contributed Surplus:			
California Medical Association		\$631,000.00	781,775.28
Balance, July 1, 1947		150,775.28	
Additional, April, 1948			
Earned Surplus			98,061.97
Balance, July 1, 1947		79,402.32	
Add, Net Income for Fiscal Year ended June 30, 1948		18,659.65	

REPORTS OF DISTRICT COUNCILORS

FIRST COUNCILOR DISTRICT

Imperial, Orange, Riverside, San Bernardino and San Diego Counties

To the President and the House of Delegates:

The component societies of the First Councilor District are all in excellent condition. The membership in each Society continues to grow, and the meetings are well attended.

Although the threat of socialized medicine again appears to be imminent at the state and national levels, all we have learned to date from Ben Read and Clem Whittaker indicates that the situation is well met, and it is our feeling that the chances are excellent that nothing really damaging to the profession will develop in the present sessions of the Legislature and Congress.

It is of paramount importance to each member of the society to be informed as to the progress of all political measures and for this reason the members are urged to attend not only the county medical meetings, but a special effort should be made to attend the meeting of the California Medical Association at the Biltmore Hotel at Los Angeles. Members are particularly urged to visit the meetings of the House of Delegates in order to gain a full knowledge of the proceedings of the House, and be brought up to date as to the present status of the political situation.

Your Councilor has endeavored to carry out the instructions and wishes of the House of Delegates and those of the county societies of the First District.

Respectfully submitted,

JOHN D. BALL, *Councilor,
First District*

SECOND COUNCILOR DISTRICT

Los Angeles County

To the President and the House of Delegates:

Your Councilor for the Second District has attended all of the California Medical Association Council meetings for the past year, the minutes of which have been published in CALIFORNIA MEDICINE at regular intervals for your study.

Again I wish to urge all members of the California Medical Association to read carefully all communications coming from the Association. Important subjects are discussed in the news letters and journals, and unless the membership at large read these reports and communications, they cannot hope to be well-informed and able to assist our Association in turning back the tide for compulsory health insurance. The California Medical Association is one of the largest associations in the United States, meeting once a year. It directs the Council through the action of the House of Delegates. Thus, it is of importance that each member of the Association attend all of the annual House of Delegates meetings. It is even of greater importance that all county, branch, and hospital officers attend these meetings.

Respectfully submitted,

JAY J. CRANE, *Councilor,
Second District*

THIRD COUNCILOR DISTRICT

Kern, San Luis Obispo, Santa Barbara, Ventura and Inyo-Mono Counties

To the President and the House of Delegates:

The component societies of the Third Councilor District have gained much in membership since the close of the war. Owing to the increase in population in the area there does

not seem to be any over-supply of physicians in any of the counties.

The societies are all active and thoroughly conversant with the problems confronting the medical profession at the present time. I feel sure that when called upon they will be a potent factor in keeping the practice of medicine on its present level.

Respectfully submitted,

H. E. HENDERSON, *Councilor,
Third District*

FOURTH COUNCILOR DISTRICT

Fresno, Madera, Kings, Tulare, Merced, Mariposa, Calaveras, San Joaquin, Tuolumne, and Stanislaus Counties

To the President and the House of Delegates:

The Fresno County Medical Society has secured the efficient services of Mr. Glenn Gillette as executive secretary. A broad program for improving public relations and other activities of the society has been adopted. Tulare and Kings counties have indicated a desire to participate in this program.

The threat of regimentation in some form of State or Federal practice of medicine is resented by the membership and hearty cooperation to oppose any such scheme is assured.

The duties of the Councilor have been given due consideration and attention.

Respectfully submitted,

A. E. ANDERSON, *Councilor,
Fourth District*

FIFTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Cruz and Santa Clara Counties

To the President and the House of Delegates:

During the past year there has been a large increase in the number of doctors in the district. County medical society meetings are better attended than formerly and there has been a lot of activity in each society.

Hospital construction is increasing. San Mateo County has voted bonds for three new hospitals—one at Redwood City (the Sequoia Hospital District), one in San Mateo (the San Mateo-Burlingame Hospital District) and a county tuberculosis hospital. Santa Clara County has obtained a new emergency hospital to be staffed by members of the County Medical Society and financed jointly by the City of San Jose and the County of Santa Clara. San Benito County has gone ahead with reorganization of its county health set-up. It would appear that more medical men are becoming conscious of their social and political responsibilities to their respective communities and are entering actively into the solution of local health problems. This has been a very marked phase of medical activity this year in the Fifth District.

Respectfully submitted,

HARTZELL H. RAY, *Councilor,
Fifth District*

SEVENTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

The Alameda County Medical Association believes it is now meeting its full public responsibility.

Through its various committees and agencies a high quality of medical care is made available to everyone in the county, regardless of the day, the time, the fee, the ability

of the patient to pay, or any other circumstance. This fact is being presented to the public through the various media of publicity: paid newspaper advertisements, newspaper stories, special events, radio, pamphlets, pictures, posters, etc.

This guarantee of a high quality of medical care to everyone is implemented by the association's Bureau of Medical Economics, a full-time qualified medical social service worker employed by the Association, the fee complaint committees, the ethics committee, the malpractice program, a part-pay plan in cooperation with Highland-Alameda County Hospital, a 24-hour telephone answering service, promotion of the voluntary health insurance plans, but primarily by the high ethical standards maintained by its members in maintaining good doctor-patient relations.

The Alameda County Medical Association headquarters, the Bureau of Medical Economics, and the blood bank have been moved to 354 Hobart Street, Oakland, where there is ample space for these expanding activities, which now have 40 full-time employees. The blood bank delivers 1,000 units of whole blood monthly. The Bureau's gross exceeds \$150,000 a year. Most of the members of the association are covered by its malpractice insurance program and make constant use of the legal and advisory preventive service offered. The expanding activities of the Alameda County Medical Association constantly open new vistas for valuable service by a county medical society. These facilities are available to the members of the Contra Costa County Medical Society. The latter is giving consideration to the establishment of its own plan.

Respectfully submitted,

DONALD D. LUM, *Councilor,
Seventh District*

EIGHTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba Counties

To the President and the House of Delegates:

During the past year I have attended all meetings of the Council. Most of the county societies comprising the Eighth District have been visited and an attempt made to keep the members informed of the policies and problems of the C.M.A. which affect county society activities.

Many new doctors continue to locate in Northern California and adequate numbers of physicians are available in all sections of the 18 counties comprising this district. There are, however, numerous areas in need of modern and expanded hospital facilities. Under the leadership of the local medical profession an attempt is being made to meet this need in Alturas, Gridley, Roseville, Sacramento and several other areas.

A blood bank serving Sacramento, adjoining communities, and a portion of the valley north was opened during the year. This was sponsored by the Sacramento County Society and represented a joint contribution by local labor unions, building supply dealers and doctors. This project has enjoyed enthusiastic community support and again demonstrates the desirable alternative to the dictation of the Red Cross sponsored blood bank program of "free" money for establishment, "free blood," etc.

Practically all eligible and desirable doctors in this district are members of their county societies and cooperation with organized medicine is excellent.

Respectfully submitted,

WAYNE POLLOCK, *Councilor,
Eighth District*

NINTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma, and Trinity Counties

To the President and the House of Delegates:

During the year 1948 your Councilor visited Marin, Solano, Napa and Sonoma counties only. A four-county meeting was held at Sonoma, California Golf Course on August 26, 1948, about eight foursomes playing golf in the afternoon. Sonoma County Medical Society was host at the dinner meeting, which was attended by about 70 members and guests. Dr. D. H. Murray of Napa was invited to preside at the meeting, during which Dr. Murray and Ben Read spoke at some length concerning our legislative program. John Hunton and Howard Hassard and others were introduced by Dr. Murray, and our President, E. Vincent Askey, was kind enough to come from Los Angeles to be the speaker of the evening. We all enjoyed the dinner and took great interest in Dr. Askey's address.

All county societies in this district are functioning well and have no problems, except the shortage of hospital beds. There now appears to be some question as to the advisability of plumping for more District Hospitals.

Respectfully submitted,

JOHN W. GREEN, *Councilor,
Ninth District*

REPORTS OF COUNCILORS-AT-LARGE

To the President and the House of Delegates:

In my last report it was stated that the most important problem during the year had been to obtain vigorous action to outlaw secret rebates and commissions.

It is gratifying to report that the Council of the California Medical Association, despite its heavy load of pressing problems, has sponsored a bill which will do much toward eliminating these practices by doctors, whether they are members of our Association or not. In the meantime, improvements have been made in our Code of Ethics for the same purpose.

Respectfully submitted,

WILBUR BAILEY, *Councilor-at-Large*

To the President and the House of Delegates:

As one of your Councilors-at-Large and Chairman of the Executive Committee, I have regularly attended the meetings of the Council and Executive Committee the past year. Inasmuch as the minutes of these meetings have been duly published in CALIFORNIA MEDICINE, it is unnecessary to comment on them further. Suffice it to say it is my impression that the Council, as now constituted, has functioned effectively in dealing with the many problems which have arisen during the year. The able chairmanship of Dr. Edwin Bruck has been of enormous value.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Councilor-at-Large*

To the President and the House of Delegates:

As one of your Councilors-at-Large, I have attended all regular and special meetings of the Council, and meetings of a number of the component county societies.

I am interested in and have worked to keep medicine on its present high standard.

I believe the strongest opposition to state or socialized medicine is for each one to give his best to every individual

patient, and to work with and cooperate with his state society in all its activities.

Respectfully submitted,

WALTER S. CHERRY, *Councilor-at-Large*

To the President and the House of Delegates:

As Councilor-at-Large I have attended all meetings of the Council of the California Medical Association, and have taken an active part on several committees and in general discussions.

I have also attended the Council meetings of the Alameda County Medical Association, in order to further correlate state and county organizations.

It was also my privilege to again attend the annual meeting of the combined Medical Associations of Marin, Sonoma, Napa, and Solano counties.

Respectfully submitted,

H. GORDON MACLEAN, *Councilor-at-Large*

To the President and the House of Delegates:

During the past year I have served my second year as Councilor-at-Large. During this time I have attended all Council meetings, entered into the discussions and decisions rendered by this body.

It is becoming more and more evident that continued cooperation and "grass-roots" public relations are essential for the survival of free enterprise.

May I again appeal to you to remain united and assist the officers of the California Medical Association.

Respectfully submitted,

EUGENE F. HOFFMAN, *Councilor-at-Large*

To the President and the House of Delegates:

I have attended all meetings of the Council (to the time of writing this report), except for one day during the past year. In my personal and society contacts I have attempted to disseminate the cogent information.

I have found the membership contacted well informed as to what is happening. Some, of course, are more sensitive than others to the seriousness of the present day political trends. What appears to be apathy and indifference is more often an expression of confidence in what they expect the officers of the Association to accomplish.

We believe the best medical care in the world is now available to the people of this country. Each doctor should do his part in telling that to the public.

The sustained efforts of the medical profession and particularly of California Medical Association, toward maintaining a suitable system of medical care for the people of California are necessary.

Each practitioner, in his office, must be a good public relations emissary by treating each patient as a person of dignity, entitled to the best medical care that can be provided at a cost the patient can afford.

For example, it is not necessary to prescribe a large amount of expensive, proprietary labeled product when a smaller quantity, or even a few inexpensive tablets may well do.

The Medical Association as an organized group must sponsor good public relations and must make its weight felt in the field of legislation. We, as an active group of citizens and professional people, are doing the proper thing when we unashamedly take on the task of educating the public

and influencing legislation toward the end that third party bureaucratic control will be eliminated, or at least kept in its proper place.

Sizeable amounts of money are required to get results. Generous and appropriate expenditure, I am sure, will be approved by the entire society when spent where needed. It is not only the readers of the medical journals, *Readers Digest*, and *Saturday Evening Post* that need to be reached, but also the great mass of people who read or listen and talk in other circles—and who also vote.

Respectfully submitted,

C. V. THOMPSON, *Councilor-at-Large*

REPORTS OF COMMITTEES

EXECUTIVE COMMITTEE

To the President and the House of Delegates:

Your Executive Committee has held meetings as occasion demanded to deal with urgent matters which could not wait for regularly scheduled meetings of the Council. The minutes of such meetings have been presented to the Council for approval and have been subsequently published. In general, it has been the aim of the Executive Committee to limit as far as possible the burden of the work of the Council itself and to filter the essential from the non-essential matter which might otherwise occupy the Council's time.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman*

**COMMITTEE ON ASSOCIATED SOCIETIES
AND TECHNICAL GROUPS**

To the President and the House of Delegates:

There have been no meetings of the Committee during the past year and no communications have reached me as chairman of the Committee from the California State Nurses' Association or from any other society or technical group.

Respectfully submitted,

ROBERT A. SCARBOROUGH, *Chairman*

AUDITING COMMITTEE

To the President and the House of Delegates:

The Auditing Committee has performed the functions laid down in the By-Laws. The professional audit of the Association's books showed them to be in order and the Committee has submitted its recommendations for the 1949 budget.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman*

**COMMITTEE ON HEALTH AND PUBLIC
INSTRUCTION**

To the President and the House of Delegates:

The Committee on Health and Public Instruction has attempted to keep in touch with health activities concerning practicing physicians, public health officials, and the general public. While no formal meetings have been held during the past year, the Committee stands ready at all times to assist the Association in the field of health education.

Respectfully submitted,

ORRIN S. COOK, *Chairman*

COMMITTEE ON HISTORY AND OBITUARIES

To the President and the House of Delegates:

This year of 1949 should remind the California Medical Association of its history and accomplishments and of the history of medical men in California. Any history, documents or copies of documents should be sent to Dr. George H. Kress, 131 South Rampart Street, Los Angeles 4.

A considerable amount of material has been collected, but it is fragmentary and more assistance from member county societies is needed.

In this connection it should be observed that there is but one set of minutes recording the organization of the California Medical Association at the beginning of this century. It would be a wise procedure, and such is strongly urged by this committee, that the minutes from the beginning of the California Medical Association be microfilmed and preserved for security reasons.

Respectfully submitted,
MORTON R. GIBBONS, SR., *Chairman*

COMMITTEE ON HOSPITALS, DISPENSARIES, AND CLINICS

To the President and the House of Delegates:

This committee has continued to interest itself mainly in the application and development of the Local Hospital District Law in California. It has maintained a liaison with the Association of California Hospitals to study and make recommendations regarding staffing these hospitals. Suggestions have been made and information given to physicians in various parts of the state in regard to planning and organization of hospitals in the rural areas of the state. This has been expedited through close association with the Committee on Rural Medical Service. The conference of representatives from 34 of the 42 local hospital districts, held at Palm Springs, January 7 and 8, 1949, was attended by the chairman. It was recommended to the conference that affiliation of this group with the Association of California Hospitals is deemed advisable. The matter is under consideration by the district hospital group. The allocation of funds by the Bureau of Hospitals of the California State Department of Health has been continuously studied.

Respectfully submitted,
CARROLL B. ANDREWS, *Chairman*

COMMITTEE ON INDUSTRIAL PRACTICE

To the President and the House of Delegates:

The standing Committee on Industrial Practice has had important business and we feel that the end results have been very satisfactory.

Early in the year, in conjunction with the California State Athletic Commission, new physical examination blanks and instructions were prepared to be used before professional boxers entered the ring. Our recommendations were well received by the State Athletic Commission.

During the balance of the year a large amount of work was done regarding the fee schedule for the Industrial Accident Commission. A complete revision of the entire fee schedule was prepared, including fee schedules for specialists. This fee schedule was adopted by the California Medical Association Council at a regular meeting, and at the present time is the schedule recommended to be used by practicing physicians in California in caring for patients under the Workmen's Compensation Act.

At present your committee is interested in the work of a sub-committee, under the chairmanship of Dr. Packard Thurber. A manual for the measurement of permanent

disability ratings is to be presented to the Industrial Accident Commission and will probably be completed before this report is given. This work is very important and will bring into focus all the loose ends of ratings for permanent disability which arise out of injuries under the Workmen's Compensation Act. Dr. Thurber has done a marvelous work and deserves a great deal of credit for the time and effort which he has expended, not only in compiling his books, but in cooperating with other members of his committee and the Industrial Accident Commission.

Respectfully submitted,

DONALD CASS, *Chairman*

COMMITTEE ON MEDICAL ECONOMICS

To the President and the House of Delegates:

In 1948 the House of Delegates instructed the Committee on Medical Economics to carry on further investigations of the public relations factors of the individual physician-patient relationship. The Council of the California Medical Association appropriated a sum up to \$5,000 to carry out this work. The Committee requested the Alameda County Medical Association to investigate this problem. Mr. Rollen Waterson, executive secretary of the Alameda County Medical Association, is in direct charge of this project, which is well under way.

The purpose of this study is to learn and to disseminate information regarding those practices of individual physicians in their relations with patients which result in good or bad public relations, not only for individual physicians but also collectively for medicine as a whole.

A previous study undertaken in 1947 resulted in an analysis of the causes of delinquent medical accounts, each of which represented a broken physician-patient relationship. The present study will consider the causes of malpractice actions, the causes of complaints filed with the Medical Economics and Ethics committees, the opinions of the many hundreds of patients who make telephone and personal calls to office headquarters, and primarily, the methods employed in the offices of the physicians, particularly those which are served by accountants working out of the Bureau of Medical Economics of the Alameda County Medical Association. Office management procedures are being investigated.

These findings will then be correlated with information already known and compiled in the specialized fields of credit, collection, billing, malpractice, bookkeeping, accounting, office management, and the like. This study should bring forth very valuable information as to why one doctor is successful and another is not. When this work is completed a full report will be given.

Respectfully submitted,

H. GORDON MACLEAN, *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS

To the President and the House of Delegates:

The University of California at Los Angeles is proceeding rapidly with the organization of its School of Medicine. The school will be developed entirely on the campus at Westwood. Dr. Stafford Warren, dean of the school, is appointing his faculty and advises us that the plans for the construction of the Medical School, its laboratories and other teaching facilities are practically complete.

The medical schools in California are faced with a huge task in selecting students for the entering class in 1949. The Selective Service Act of 1948 has stimulated a large number of young students to seek admission to schools of medicine

as soon as they meet the minimum qualifications for admission. Military duty for these students will be deferred until they have completed medical school. It is the desire of the Armed Forces and the national headquarters of Selective Service to have a certain percentage of such young men deferred so that their military service may be in the Medical Corps. The schools also are receiving applications from a fairly large number of students whose graduate education was interrupted or interfered with by a period of military duty. It is quite difficult for committees on admission of the medical schools to select the candidates of outstanding promise in the field of medicine from such a large number of applicants.

In order to continue the supply of physicians without interruption, the national headquarters of Selective Service has approved a procedure whereby students who would be eligible for admission to medical school in the classes beginning in the autumn of 1950 and the autumn of 1951 may be given provisional acceptances and, therefore, a deferment from military duty under Selective Service until they are finally accepted or rejected for admission to the medical school in their respective classes. National headquarters also has agreed to defer all regularly matriculated students in good standing in medical school until they complete their required medical school courses.

The demand for continuation courses in medicine still continues great. Review or refresher courses and post-graduate training are in great demand and still continue to exceed the facilities and faculties available to give such instruction. These continuation study courses are being given by each of the medical schools in California.

Three of the general hospitals of the Veterans Administration are being operated and staffed by committees and members of the faculty of the five schools of medicine. This, to date, has proven quite satisfactory from everyone's point of view, as it has raised the standard of patient care, provided graduate training for residents, and has also given opportunity for a limited amount of research work in these three centers.

There is under discussion and consideration at Washington, D. C., the possibility of Federal financial support for the medical schools in the United States. Several meetings with representatives of the Association of American Medical Colleges and the Council of Medical Education and Hospitals of the A.M.A. have been held with representatives of the Federal Security Administration. It is our understanding that certain legislation to provide financial support for medical schools is being prepared but, at the time of the submission of this report, no final proposal has been made or legislation introduced into Congress. This is being studied carefully by the medical schools and their respective university administrators and boards of trustees.

Respectfully submitted,
L. R. CHANDLER, *Chairman*

COMMITTEE ON ORGANIZATION AND MEMBERSHIP

To the President and the House of Delegates:

Besides making a routine report of association membership and its distribution, at the last session of the California Medical Association in San Francisco, the Committee on Organization and Membership was given the additional duty of investigating professional rebates as they affect the professional membership throughout the state. In this report, the committee wishes to submit a statement to the effect that in no county unit within the state has such a problem come up, or at least it has not been called to the attention of the committee.

The committee feels that, with the passage of an anti-rebate bill by the California State Legislature at the present session, the rebate problem will be properly solved by state authorities in any instance wherein a member is found guilty of accepting or giving rebates. Especially at this time, medical practitioners can ill afford to allow themselves to be made targets for adverse publicity by accusations of unprofessional conduct relating to any phase of the practice of medicine.

As noted by the appended statistics from the central office, the Association made a fair growth during the past year. Since the last report, 1,055 new physicians have been licensed in the state, of whom 320 joined the California Medical Association. These 320 physicians represent too small a percentage of the available new men in California who are qualified by training and practice to become a part of an organization which has done so much to aid the practice of medicine in this state and to promote good public relations for its members.

The appended resume of membership broken down by counties follows.

Respectfully submitted,

CARL L. MULFINGER, *Chairman*

C.M.A. County Society Membership Totals For Calendar Year 1948

County Medical Societies	Member-ship in 1947	Number Licensed (1947 Directory)	Member-ship in 1948	Number Licensed Physicians (1948 Directory)
Alameda	673	1,062	733	1,134
Butte-Glenn	36	58	43	67
Contra Costa	79	138	104	159
Fresno	175	201	191	204
Humboldt	34	52	44	57
Imperial	25	28	26	33
Inyo-Mono	9	10	8	12
Kern	99	142	103	168
Kings	23	25	26	32
Lassen-Plumas-				
Modoc	13	23	16	25
Los Angeles	4,038	5,869	3,956	6,316
Marin	66	90	65	101
Mendocino-Lake	24	36	23	38
Merced-Mariposa	27	48	34	58
Monterey	75	116	91	124
Napa	45	68	47	72
Orange	172	228	181	253
Placer-Nevada-				
Sierra	33	53	39	66
Riverside	87	149	99	156
Sacramento	209	241	219	261
San Benito	7	9	6	9
San Bernardino	192	276	219	281
San Diego	400	630	444	685
San Francisco	1,239	2,009	1,281	2,116
San Joaquin	123	152	138	175
San Luis Obispo	35	41	36	48
San Mateo	135	178	149	211
San Barbara	127	167	138	188
Santa Clara	287	366	292	410
Santa Cruz	54	71	53	76
Shasta-Trinity	17	22	14	29
Siskiyou	11	19	11	22
Solano	53	91	61	98
Sonoma	78	103	84	108
Stanislaus	45	70	66	90
Tehama	9	12	8	11
Tulare	60	75	73	78
Ventura	53	95	58	101
Yolo	26	24	24	27
Yuba-Sutter-				
Colusa	27	33	37	36
Totals	8,920	13,080	9,240	14,135

COMMITTEE ON POSTGRADUATE ACTIVITIES

To the President and the House of Delegates:

This committee has carried on the program of regional postgraduate seminars as authorized by the House of Delegates at its 1948 convention under the direction of Carroll B. Andrews, M.D. Eleven seminars have been held in the

past year, prepared in accordance with the general plan of the committee, and tailored to fit specific requests by members of the county medical societies concerned. The attendance at these regional seminars is increasing and the reception improving.

The Postgraduate Committee held a conference with representatives of the medical schools in the state, county medical societies, the Tuberculosis Association, the Heart Association, the California State Department of Public Health and related groups during the California Medical Association convention in San Francisco in April, 1948. Another conference will be held May 11th, 1949, during the California Medical Association convention in Los Angeles, for the purpose of further integrating the common postgraduate interests. A supplementary report of the operation of the postgraduate seminar program is being submitted to the proper reference committee.

Respectfully submitted,
JOHN C. RUDDOCK, *Chairman*

COMMITTEE ON PUBLICATIONS

To the President and the House of Delegates:

Chapter V, Section 10, Committee on Publications, in the Constitution and By-Laws of the California Medical Association, 1948:

"The Committee on Publications shall consist of three elected members, and ex-officio the Editor, the Associate Editor or Editors, and the Secretary-Treasurer.

"The Committee, subject to the instructions and approval of the Council, shall have authority to arrange for the publication and distribution of the Official Journal of the Association and such other publications as the Council or the House of Delegates may direct; and shall consult with the Editors, and with the secretaries of the component county societies to the end that the scientific and organization work of the Association may be presented to the members of the Association in the best possible manner."

Your committee feels that the scientific and organization work of the Association is presented to the members in the best possible manner.

Respectfully submitted,
GEORGE I. DAWSON, *Chairman*

COMMITTEE ON SCIENTIFIC WORK

To the President and the House of Delegates:

The Committee on Scientific Work met with the section officers and by correspondence during the year. Amongst other decisions made in connection with the Annual Meeting were the following:

1. The scientific program will be modelled along the general lines of the 1947 and 1948 annual meetings, but a relatively free afternoon will be scheduled on the second day of the meeting. This will give members time to visit the scientific and technical exhibits at greater leisure or to attend local clinics, golf courses, or other milieux of distraction.

2. A paging system will be set up so that members may be given messages; however, members must notify their own secretaries as to their probable location (the section meeting and so forth) in order to facilitate this paging.

3. Members will be asked to wear badges at all times. The Association has grown so large that admission to large

general scientific sessions shall be by badge. A section aide will be requested to monitor attendance at smaller section meetings, on a voluntary basis.

4. Scientific exhibit space will be provided.
5. The question of holding daily panel discussions, wet clinics, hospital clinics and so forth was discussed but decided against at the present time.

6. The Council has authorized the inviting of five official guest speakers to each of the annual conventions. The Committee on Scientific Work, in accordance with the By-Laws, has the duty and privilege of inviting these speakers, subject to Council instructions. Inasmuch as some of the sections have privately invited guests from time to time, and visiting physicians from other states sometimes give addresses or discussion, the Committee decided that formal program publicity regarding guest speakers shall be confined to official invited guests of the Association.

7. The Committee is cognizant of the large amount of scientific fare now offered to physicians in California, notably in connection with annual convention of such groups as the American College of Physicians, the American College of Surgeons, the Radiological Society of North America, and other national associations which meet periodically in this state. In addition, there are refresher courses offered by the medical schools, the special courses and lectures sponsored by such groups as the Cancer Society, the Heart Association, the Trudeau Society, and so forth. It therefore believes it desirable to keep our own annual scientific meeting down to a reasonable number of days, and to attempt maintaining the number of papers to a digestible amount.

8. Some of the other medical organizations in this state have continued to request time for scientific sessions during the annual meeting of the California Medical Association. Your Committee believes that at such times it is preferable for scientific papers to be presented before regular sections of the State Association. This prevents conflicting symposia and also makes the papers more readily available for publication in the Association's journal.

The following policy of the Committee on Scientific Work, adopted in 1946 and 1947, is reaffirmed by the present Committee:

a. Medical organizations wishing to hold meetings concurrent with the Annual Meeting of the California Medical Association are requested to plan such meetings so that they do not conflict with the scientific or other programs of the state medical organization. This will usually entail the special society holding its meeting *prior to or subsequent to* the three and one-half days required for the state meeting.

b. Medical organizations wishing to hold a short one- or two-hour organizational meeting *during* the C.M.A. meeting are welcome to do so, with due announcement in the Journal and program, provided no formal scientific session is planned which might conflict with the regular session.

c. Scientific papers prepared by C.M.A. members for presentation in connection with the Annual Meeting should be offered to the appropriate Section of the C.M.A., and thereby be available for publication in the State Journal.

The Committee received with regret the resignation of Dr. William Russell during the end of 1948, and congratulates him on his distinguished teaching appointment in Texas; the Council selected Dr. Robert Dennis of San Jose to serve the remainder of his term of office.

Respectfully submitted,
L. HENRY GARLAND, *Chairman*

REPORT OF EDITORIAL BOARD CALIFORNIA MEDICINE

To the President and the House of Delegates:

The members of the Editorial Board are:

Chairman of the Board:
Dwight L. Wilbur, San Francisco

Executive Committee:
Albert J. Scholl, Los Angeles
H. J. Templeton, Oakland
Edgar Wayburn, San Francisco
Dwight L. Wilbur, San Francisco

Anesthesiology:
William B. Neff, San Francisco
Charles McCusky, Los Angeles

Dermatology and Syphilology:
Paul Foster, Los Angeles
H. J. Templeton, Oakland

Eye, Ear, Nose and Throat:
Frederick C. Cordes, San Francisco
Lawrence K. Gundrum, Los Angeles
A. R. Robbins, Los Angeles
Lewis Morrison, San Francisco

General Medicine:
Maurice Sokolow, San Francisco
O. C. Rallisbach, Woodland
Edgar Wayburn, San Francisco
John Martin Askey, Los Angeles
W. E. Macpherson, Los Angeles

General Surgery:
Frederick L. Reichert, San Francisco
C. J. Baumgartner, Beverly Hills

Orthopedic Surgery:
Frederic C. Bost, San Francisco
Hugh Jones, Los Angeles

Thoracic Surgery:
John C. Jones, Los Angeles
H. Brodie Stephens, San Francisco

Industrial Medicine and Surgery:
Rutherford T. Johnstone, Los Angeles
John E. Kirkpatrick, San Francisco

Plastic Surgery:
George W. Pierce, San Francisco
William S. Kiskadden, Los Angeles

Neuropsychiatry:
Karl M. Bowman, San Francisco
John B. Doyle, Los Angeles

Obstetrics and Gynecology:
Daniel G. Morton, San Francisco
Donald G. Tollefson, Los Angeles

Pediatrics:
E. Earl Moody, Los Angeles
William G. Deamer, San Francisco

Pathology and Bacteriology:
Alvin G. Foord, Pasadena
Alvin J. Cox, San Francisco

Radiology:
R. R. Newell, San Francisco
John W. Crossan, Los Angeles

Urology:
Lyle Craig, Pasadena
Albert J. Scholl, Los Angeles

Pharmacology:
Hamilton H. Anderson, San Francisco
Clinton H. Thienes, Los Angeles

Public Health:
George Uhl, Los Angeles
Charles E. Smith, San Francisco

At its one meeting in the past year, the executive committee of the Editorial Board unanimously approved as policy the encouragement of greater production of articles by practicing physicians outside the metropolitan centers by earmarking more space in CALIFORNIA MEDICINE for the publication of such material.

Members of the board reviewed an increasing number of manuscripts during the year. Despite the greater load,

many found time and energy to make specific suggestions to authors for revisions which ultimately brought to publication valuable articles which otherwise might not have been fully suitable.

The death of Dr. Lambert B. Coblenz in January of this year caused two vacancies, one on the executive committee of the board and the other in the general medicine section. Dr. Edgar Wayburn of San Francisco was appointed by the Council in March to fill these positions. During the year Dr. Lyle Craig accepted appointment to fill a vacancy in the urology section of the board brought about by the death of Dr. Clark Johnson early in 1948.

Respectfully submitted,

DWIGHT L. WILBUR, Chairman

ANNUAL REPORT OF THE CANCER COMMISSION

To the President and the House of Delegates:

The work of the Cancer Commission has required meetings of the Commission of its executive committee practically every month during the year. At the request of the Department of Health, the Cancer Commission acted as technical advisors in the preparation of the Department's report to the Legislature on cancer and other chronic diseases. This extensive report on cancer was submitted to the Department after review and revision by the Council of the California Medical Association.

The educational film on "The Examination of the Breast for Early Cancer" was finished during the summer. The film has had the approval of the American Medical Association and the American College of Surgeons and has been added to their list of approved films. The narrative for this film was written by Dr. Alson R. Kilgore of San Francisco and the demonstration in the film was by Dr. Eric Larson of Los Angeles. A second educational film in sound and color on "Cancer of the Rectum" is being prepared by Dr. Robert Scarborough of San Francisco.

During the year the Cancer Commission has conducted cancer conferences for the county medical societies in 18 counties. During the month of October many eastern speakers were available for these conferences because of the annual meeting of the American College of Surgeons in Los Angeles. A large number of the members of the California Medical Association have given generously of their time and experience in the conduct of these cancer conferences. All of these meetings have been well attended and many of the county medical societies have requested that they be repeated each year. At present plans are being made for cancer conferences in 30 different counties under the auspices of the local county medical society. Cancer conferences will be available upon request in all counties no matter how small.

Two refresher courses have been held by the tumor board of the Los Angeles County General Hospital during the year. A refresher course in cancer will be held during March in San Francisco.

Two refresher courses for dentists have been held under the auspices of the University of Southern California at the Los Angeles County General Hospital. A refresher course for dentists soon will be held at the University of California.

Through the courtesy of the Editor, the "Cancer Commission Studies" have been appearing regularly in CALIFORNIA MEDICINE. Upon the completion of these chapters they will be compiled in a California Cancer Manual which will be distributed by the California Medical Association. The editorial supervision of this series of "Cancer Commission Studies" has been in the hands of Drs. L. G. Dobson, Clarence J. Berne, Otto Pflueger and John Kenny.

For 17 years the Cancer Commission has conducted pre-convention conferences in radiology and microscopic tumor pathology. During these years a large number of valuable microscopic slides have been studied and preserved. The section of pathology of the California Medical Association has requested the Cancer Commission to establish a registry of microscopic tumor pathology to include the cases presented at the semi-annual conferences and conduct a follow-up through the pathologists who have submitted them. The Commission has approved such a registry and has appointed Dr. E. M. Butt, professor of pathology at the University of Southern California, as curator of the registry.

As in former years, the members of the Cancer Commission have acted as members of the board of directors of the California division of the American Cancer Society. That society has grown until it now has 25 different county branches and is putting on the largest program of health education in the state. Insofar as it is within the power of the California Board, this educational program is being conducted on the basis of hope—that is, that *early cancer is curable*.

Dr. Frederick Hook, medical director of the Cancer Commission, has arranged and supervised most of the cancer conferences during the year. Dr. Hook is maintaining close contact with all of the tumor boards in the state and assisting the smaller and newer boards as requested. There are at present approximately 50 functioning consultative tumor boards that are making quarterly reports to the Cancer Commission.

The Commission has received substantial financial support during the year in its educational program from the California Department of Public Health and from the California division of the American Cancer Society.

Respectfully submitted,
LYELL C. KINNEY, Chairman

ADVISORY PLANNING COMMITTEE

To the President and the House of Delegates:

The Advisory Planning Committee has met throughout the year, planning its meetings generally to precede the meetings of the Council, to which body the Committee makes its reports. All items on which the Committee has reported or made recommendations to the Council are found in the minutes of the Council, as printed after each meeting in the official journal.

The Advisory Planning Committee has considered and discussed matters of public relations and other items which are before the Association and has given its cooperation to the officers and committees of the Association.

Since the appearance of the last report of the Committee, the membership has been increased by two appointees of the Council. These are Mr. Ed Clancy, field secretary of the Association, and Mr. Glenn Gillette, executive secretary of the Fresno County Medical Society.

Respectfully submitted,
JOHN HUNTON, Chairman

C.M.A. BLOOD BANK COMMISSION

To the President and the House of Delegates:

The C.M.A. Blood Bank Commission will be one year old on April 12, 1949. At present it has 14 members, with two new members whose nominations await confirmation by the Council. Only members of the C.M.A. are eligible for election. The commission is composed of men well versed in

blood banking. Four general meetings have been held during the year with adequate representation from the entire state.

Our basic program is:

1. To encourage, to promote, to sponsor, and to aid in the establishment of community type, non-profit blood banks in California wherever their establishment is clearly indicated. Control of such banks must be under the local county medical society.

2. To actively promote and strongly encourage high and uniform standards of service. The standards we recognize are those outlined in the Biologics Act of the United States Public Health Department.

3. To plan and foster the training of personnel for blood banks and to serve as a clearing house for information.

4. To sponsor and aid local medical societies in developing "walking blood banks" in sparsely settled areas where it is economically unsound to erect a blood bank. The Rh factor should be determined at the same time as the blood typing.

5. To promote and foster the immediate exchange of ideas and materials, and the dissemination of information relating to blood banking and its technical methodology by education, publicity and research.

6. To plan and foster cooperation and integration of all existing and contemplated blood banks in time of emergency or disaster.

7. To aid other states and the nation in regard to blood products to the limit of our ability when disaster strikes, or when an emergency condition exists.

The Commission has tried, and will continue to strive, to reach a compromise agreement with the National American Red Cross to assure that the best interests of the state will be served. We cannot subscribe to the visionary method of blood banking at present sponsored by the Red Cross—free blood for all and no donor replacement. We believe in adequate blood for all, at cost, and a donor replacement—in other words, a true blood bank. Under our system no one in need has ever been turned away, and the communities are being given one hundred per cent blood coverage.

As of December 31, 1948, the Public Health Department of California announced that the stock of war surplus Red Cross plasma was practically exhausted. This knowledge should have a salutary effect in that it will stimulate and energize medical societies to hasten the establishment of non-profit blood banks in those areas which we deem inadequately served at present. Dependence on gifts often has a stultifying effect on the initiative of those who receive them.

Many meetings have been held with representatives of county medical societies and other interested individuals regarding methods of establishing blood banks. We welcome all such discussions, as well as suggestions and criticisms.

There are at present four community-type blood banks operating in the state, all north of a line drawn west from Fresno to San Luis Obispo. Sacramento County Medical Society opened its bank October 31, 1948. It is functioning most efficiently. Santa Rosa, Bakersfield, Fresno and Ventura are actively engaged in similar plans and policies. Work in these areas should come to fruition in 1949. We also recommend that regional banks be created in Redding, Santa Barbara and San Bernardino. The Los Angeles County Medical Society has appointed a committee to study the county's needs. Some progress has been made and a solution of the complex blood bank situation which pertains to that area may be expected this year. At this time there is only 52 per cent coverage. The need for a coordinated blood bank system in Los Angeles County is great.

A sub-committee on reciprocity, cooperation and uniform standards between existing community banks was appointed November 13, 1948. Much simplification and a great deal of clarification have been gained so far.

The Commission will erect an educational display booth at the meeting of the C.M.A. in Los Angeles.

The Commission is actively engaged in studying existing laws, rules and regulations under which blood banks operate. The great expansion of blood banking, with its many ramifications, calls for a clarification in existing laws, and possible inclusion of new ones in the Medical Code. An amendment to the Biologics Act was proposed by the Commission for presentation before the present Legislature.

The Commission has just received Senate Bill No. 584, which deals with blood banking. The bill will be carefully studied by the Commission and our recommendation relayed to the C.M.A. Council.

Dr. Pinkerton of Honolulu asked for, and received the reciprocal support of California community blood banks. In the event of a major disaster or war we would help the Territory of Hawaii to the limit of our facilities.

The publicity highlight of last year was the excellent "California Caravan" radio show dramatizing the founding of the Irwin Memorial Blood Bank of the San Francisco County Medical Society. The program greatly aided our state plan.

Respectfully submitted,

JOHN R. UPTON, *Chairman*

COMMITTEE ON PUBLIC RELATIONS

To the President and the House of Delegates:

The Committee on Public Relations is composed of ex-officio members named in the Constitution and By-Laws; it functions in cooperation with the Council of the Association and has named as its director the Executive Secretary of the Association, who serves under the Council and acts as liaison between the committee and the Council.

During the past year the committee has been inactive, the broad program of public relations inaugurated by the Association several years ago having been under the direct supervision of the Council without the committee intervening. The Council, in turn, has pursued a policy of public relations approved each year by the House of Delegates.

Respectfully submitted,

JOHN HUNTON, *Director*

COMMITTEE ON INDUSTRIAL HEALTH

To the President and the House of Delegates:

The Committee on Industrial Health, newly appointed last year, anticipates meeting formally with the Committee on Industrial Practice early in May in Los Angeles, and that at this meeting the agenda will include a delineation of the areas of the activities of the two committees, which have already been outlined informally, and a discussion of topics which are of common interest to both committees.

Your Industrial Health Committee members, through their personal contacts with both official and non-official agencies in the field of industrial health, have had their attention called frequently to the situation regarding "Standing Orders for Industrial Nurses," and are of the opinion that interest in this subject will not abate until some satisfactory method of supplying the desired medical supervision of nurses in industry is found.

The Western Association of Industrial Physicians, the California State Nurses Association, and the Western Association of Industrial Nurses are but three of the organizations interested in this subject. It is anticipated that one or more of these groups may again approach the Council officially in the future on the subject. Legal and legislative features ap-

pear to be involved and the over-all picture does concern—at least indirectly, if not directly—institutional and office nurses, and for that reason your Committee on Industrial Health does not feel that it can assume to report on all phases of the subject. We do feel, however, that the problem calls for continued study on our part.

It is our opinion that emphasis should be placed on the fact that the failure of the "Standing Orders for Industrial Nurses" prepared by the Council of Industrial Health of the American Medical Association to win endorsement by the Council of the C.M.A. was not due to any unwillingness of California physicians to assume proper supervision over nurses in industry, but was due to provisions in the California Nursing Act and/or the California Medical Practice Act, which are peculiar to California and are not comparable to those in the many states in which these orders have been adopted. It is our belief that the lag between acts passed some time ago and the recent growth of industry in California resulting in the employment of a greatly increased number of industrial nurses has caused the anomalous situation referred to, and this belief is apparently being more widely accepted by the other interested agencies than it was at the time the matter was originally acted upon by the Council.

Informal discussions, we may report, have also convinced us that the desire for standing orders expressed on the part of the nurses' organizations is prompted entirely by a wish to have effective medical supervision which will justify them in procedures which are commonly accepted as good practice throughout the United States in industry, and that the endorsement of these limited practices will—both by implication, and in fact—conversely discourage the medical liberties taken, whether in industrial establishments, or in institutions, or in private offices by those nurses or lay attendants who neither desire nor seek any reasonable limitations in their activities.

Your Committee at this time has no opinion whether the proper long-range solution of this problem will lie in the endorsement of any set of standing orders for industrial nurses proposed to date or in legislation which would modify either of the existing practice acts as applied to nurses or physicians, or by some other means yet to be explored. We do, however, recommend a continued study of the problem and cooperation with other professional groups if and as such cooperation is requested or its desirability is evident.

Respectfully submitted,

CHRISTOPHER LEGG, *Chairman*

COMMITTEE ON RURAL MEDICAL SERVICE

To the President and the House of Delegates:

The primary function of the committee in 1948 was the organization and direction of the Second Annual California Rural Health Conference held at Sacramento, October 16, 1948. Through the medium of this conference the medical problems confronting the rural population, the physicians, the hospitals, the health departments and other interested agencies were presented and discussed. A brochure containing the formal addresses of the speakers appearing on the program was published and distributed to the participating organizations, county medical societies and the chairmen of the American Medical Association committee and rural health committees in other states. A summary of the papers presented was prepared and published in *California Medicine*, January, 1949.

Effort will be made during 1949 to project the committee work into the county and regional levels to increase the effectiveness of local health council development. It is felt

that this will expedite the solution of many of the rural medical problems at their origin.

Your chairman attended the Fourth Annual National Rural Health Conference in Chicago, February 3, 4, and 5, 1949. The information and material obtained will be of great value in furthering our state and local program.

Respectfully submitted,

CARROLL B. ANDREWS, *Chairman*

COMMITTEE ON CODIFICATION OF MEDICAL ETHICS

To the President and the House of Delegates:

The Ethics Committee has made several suggestions which are incorporated as resolutions to be presented to the House of Delegates, one of which concerns the use of fictitious names by doctors of medicine. Not only is this contrary to the state law in many cases, but it may cause patients to confuse doctors of medicine with charlatans of various types who practice under names such as "diagnostic clinics," "health offices," "basic science foundations," "institutes," etc.

Further attempts to codify the Code of Ethics seemed unwise at this time in view of the extensive overhauling which our parent body, the American Medical Association, is giving this Code with a view to eliminating rebating practices and toward making the Code more effective.

Respectfully submitted,

WILBUR BAILEY, *Chairman*

PHYSICIANS' BENEVOLENCE COMMITTEE

To the President and the House of Delegates:

The Physicians' Benevolence Committee in calendar 1948 disbursed \$6,600 in benevolences, of which \$6,000 was handled by the Los Angeles County Physicians' Aid Association. As in past years, the bulk of need for aid appears to center in or gravitate to Los Angeles County, and the service of the county organization has been willingly and gladly extended to the committee in meeting the need there. The balance of disbursements during 1948 was made in other counties, payments being made only after a local investigation had been made and the benevolence approved by vote of the Committee.

Receipts of the Committee during 1948 totaled \$12,542.52, of which \$9,850.00 came from the Association at the rate of \$1 per active member and \$2,692.52 represented the contribution of the Woman's Auxiliary to the California Medical Association. Again the thanks of the Committee and of the entire Association are due the Woman's Auxiliary for its untiring and continued support of the Committee and its activities. Following payment of the benevolences noted above, the Committee placed in its reserve account, as a permanent sinking fund, the sum of \$9,078.00. This fund totaled \$22,605.25 as of December 31, 1948, and current funds, available for payment of benevolences, stood at \$4,794.84 on that date.

During the year the Committee regretfully accepted the

resignation of one of its members, Doctor Robert S. Peers, who had been a member since the inception of the Committee and who had served loyally and effectively at all times. The Committee has been pleased to welcome Doctor John W. Sherrick of Oakland as successor to Doctor Peers.

Respectfully submitted,

AXCEL E. ANDERSON, *Chairman*

COMMITTEE FOR STUDY OF PROBLEMS OF ALCOHOLISM

Acting under a resolution passed by the House of Delegates at the 1948 Annual Session of the California Medical Association, E. Vincent Askey, M.D., president of the Association, appointed a committee of five physicians to study the problem of alcoholism in California with a view to making suggestions to the State Department of Public Health and to C.M.A. and its members as to ways to meet the problem and help the addict. Members of the committee are Cullen Ward Irish, M.D., chairman, J. Martin Askey, M.D., Hall G. Holder, M.D., George H. Houck, M.D., and Malcolm H. Merrill, M.D.

After a detailed study of economic, social and medical aspects of the problem, results of which are contained in a 67-page typewritten report submitted to the C.M.A. Council, the committee recommended:

1. That physicians give more attention not only to alcoholics who consult them but to alcoholics in families of their patients, with regard to personality problems as well as to pathologic changes resulting from the habit.
2. That beds in county, municipal and private hospitals be made available for patients undergoing treatment for alcoholism.
3. That diagnostic and rehabilitation centers be developed in areas of population concentration for brief hospitalization and treatment and for directing patients to appropriate agencies for further rehabilitation and supervision; that convalescent units for vocational rehabilitation be established; that psychiatric interviews be conducted at these proposed centers so that suggestions may be made to courts or to law enforcement agencies as to the procedure indicated in individual cases.
4. That a broad educational program be developed, including, besides public education, symposiums and lecture courses for physicians in general practice and special training for physicians, psychiatrists, auxiliary personnel (such as psychiatric nurses and social workers) law enforcement workers and others who deal directly with those addicted to alcohol.
5. That active research be undertaken, embracing biochemistry and physiology, psychiatry and treatment as these subjects bear on acute and chronic alcoholism.
6. That a single administrative authority, preferably an agency of the state that can utilize existing agencies for the most part, be made responsible for organizing, developing and operating an over-all program for dealing with the problem of alcoholism.
7. That the costs of putting the recommendations into effect be met by legislative allocation of a portion of revenues from the taxes on production and sale of alcoholic products.

ANNUAL COUNTY MEDICAL SOCIETY REPORTS

FIRST DISTRICT

Imperial, Orange, Riverside, San Bernardino, and San Diego Counties.

John D. Ball, Santa Ana, *Councilor*.

Imperial County Medical Society

The past year saw the opening of a blood bank at the Imperial County Hospital. The County Medical Society has supervision over the blood bank and responsibility for its operation.

Two very instructive postgraduate Seminars for members of the medical society were put on by the C.M.A. under the able supervision of Dr. Carroll B. Andrews, director of Postgraduate Activities.

The society holds its regular meetings the second Tuesday of each month at 8 p.m. at the Imperial County Hospital. The business meeting is followed by a scientific program.

ERNEST BROCK, *Secretary*

Orange County Medical Association

Our association is still suffering from "growing pains." The membership is expected to run over 200 before the end of this year, just double that of the immediate pre-war years. We have had to shift our meeting place as the attendance increases, always looking for a bigger hall.

Our major problem at present is the planning for future developments and a more serious public relations program. There is no doubt that we must soon consider the hiring of an executive secretary to take over our many problems. Under consideration now is the combining of our bulletin, credit bureau, and secretary-treasurer's offices under one roof and management.

LLEWELLYN E. WILSON, *Secretary*

Riverside County Medical Association

An annual out-of-town meeting of the Riverside County Medical Association was held at Palm Springs. Dr. Vincent Askey and Dr. Richard Bullis were guest speakers at the 1948 meeting.

The second Monday of each month at 8 p.m. the Association meets at the Mission Inn. A scientific program is presented, and this is followed by a business session.

The secretary of the association publishes a monthly bulletin which is distributed the first week of each month.

CECIL J. LORD, *Secretary*

San Bernardino County Medical Society

We have steadily increased in our membership. At the present time active members number 224, and there are seven retired members.

Interest in the society is keen, and we have a good attendance at our meetings. The programs have been arranged by Dr. Max Goodman. Meetings are usually held once a month at the San Bernardino County Hospital. However, during the past year one of the meetings was held at the Patton State Hospital, where, after a fine dinner, Superintendent Dr. O. L. Gerick presented Tracy J. Putnam, M.D., who gave a program on prefrontal lobotomies.

The postgraduate activities committee presented seminars in December, 1948, at the Riverside Mission Inn, and March 1, 1949, at the Arrowhead Country Club, San Bernardino. These seminars took the place of our regular meetings on that date. They were well attended and we feel that they definitely had something to offer our members.

The society publishes a bulletin each month, with the secretary as the editor. The bulletin contains articles of timely interest, programs of the meetings and items of general interest to the profession. The bulletin is not only self-supporting from paid advertisements, but has made some revenue for the society.

The society is fortunate in having Dr. Arthur E. Varden as president. He will be remembered as having been our secretary for many years, and is well versed with all phases of the problems of the society.

Dr. Walter S. Cherry, district councilor, is always available for advice and help.

We are striving to get the county hospital enlarged. The patient load has tremendously increased, and we feel that additional facilities must be provided. Meetings are

being held with the county medical committee, county hospital committee, the medical advisory board, and our county board of supervisors. Some progress will undoubtedly be made in the near future.

CARL M. HADLEY, *Secretary*

San Diego County Medical Society

The San Diego County Medical Society is steadily growing in numbers, now having a combined membership and applicant list of over 525. The routine functioning of the society is being carried on as usual.

The field of public relations has been covered by news items in the local press, radio programs and various contacts with lay groups throughout the city. Our local blood bank is attempting to fulfill the need for transfusions in cooperation with the Navy, Red Cross, and health department.

Various postgraduate courses have been sponsored by the society.

In short, as the need has arisen the society has attempted to express itself and extend itself for the betterment of the profession as a whole.

W. H. GEISTWEIT, JR., *Secretary*

SECOND DISTRICT

Los Angeles County

Jay J. Crane, *Los Angeles, Councilor*.

Los Angeles County Medical Association

The Los Angeles County Medical Association again, as in 1947, had a large influx of new members in 1948. With a membership in excess of 4,000, it became mandatory to expand the offices and the personnel of the association. The temporary physical facilities housed in a building purchased in 1946 became totally inadequate, leading to a building program—temporary in nature—offering office space suitable for the increased personnel.

The indoctrination program for new members, which has been operating with excellent results for some several years, was continued, and according to the present outlook will remain as a permanent part of association procedures.

The council and board of trustees activities have been directed primarily toward the issues raised by the threat of federal or state medicine. Committees of the association have been very active in their various capacities in attempting to build better public relations for medicine and in finding methods of avoiding bad public relations. Our fee and professional conduct committees—a total of four committees—have been exceedingly active in this respect.

Before the end of the year plans were made to collect as quickly possible the \$25 assessment for the American Medical Association. The result of the program developed has proved highly satisfactory during the first few weeks following the sending of statements for this assessment.

A great deal of work in the field of postgraduate activities has been accomplished, especially through the activities of Dr. Louis J. Regan, at breakfast club postgraduate sessions held in the outlying areas of the county.

Much closer contact has been made with various organizations—the Chamber of Commerce, Welfare Council of Metropolitan Los Angeles and its various committees, health departments, etc.

The Los Angeles County Medical Association Research Foundation has been launched, and considerable progress has been made by the Physicians' Aid Association looking forward to the purchase of property on which will be built a home some day for needy physicians and their families.

The Woman's Auxiliary has been very helpful during the year, and very desirous of aiding in any work the Association may engage upon where the Auxiliary's services may be of value.

Finally, financially the Los Angeles County Medical Association is in a most satisfactory condition.

R. O. BULLIS, *Secretary*

THIRD DISTRICT

Inyo-Mono, Kern, San Luis Obispo, Santa Barbara, and Ventura Counties.

Harry E. Henderson, *Santa Barbara, Councilor*.

Inyo-Mono County Medical Society

The year 1948 has given our society some growth in membership. Two new members in a society as small as

ours means a 33-1/3 per cent increase in size. We now number eight.

By welcoming the dentists of our area as associate members we have had good meetings. We meet alternately in Bishop and Lone Pine, thus equalizing the travel burden, for our most northerly and southerly members' homes are nearly 275 miles apart.

The new Northern Inyo District Hospital building is nearing completion in Bishop. This is the first district organized under the new California hospital district law. It serves an area of over 5,000 square miles. The organization of its staff is under way. There is a growing sentiment in the southern half of Inyo County for the formation of another hospital district to serve that large area.

The new Industrial Insurance Fee Schedule compiled by our California Medical Association is a fine piece of news to us. It is indeed gratifying to see that, statewide, the medical profession now sees a truth that this society recognized in 1944. At that time we adopted a new fee schedule for industrial accident cases, and we gave an ultimatum to the insurance carriers to the effect that doctors were neither morally nor legally bound to work for obsolete fees, regardless of the pronouncements of any state bureau.

LLOYD S. BAMBAUER, *Secretary*

Kern County Medical Society

The distinction of being the smallest county medical society in the State of California to have successfully supported a program of public relations requiring the service of a full-time office of executive secretary belongs to Kern County. Starting with membership of 98 at the time of establishing the office, the society now has a membership of 120 and a year of successful experience, with promises of a bright future.

Following the enactment of a county ordinance providing for a seven-man commission to govern the Kern General Hospital, the society became actively engaged in a drive to follow through with a complete clean-up of the Kern General Hospital administration. Results much beyond expectations were achieved. The way was cleared for a new qualified administrator, and one believed to be so qualified was secured; a visiting staff has been organized, and the morale of the entire hospital has been raised to a fair level. Unless some unanticipated event should occur, the bad name of the Kern General Hospital, earned over many years of turmoil, will be but an incident in the history of Kern County.

The Medical Economics Council, incorporated shortly before the beginning of the year, got well under way. A collection agency was put into operation and an auditing and accounting service was provided for the doctors' offices, all of which services are handled in such a way as to retain an improved doctor-patient economic relationship.

During the year, the medical society sponsored a cancer symposium which, through cooperation with the American Cancer Society, brought outstanding speakers to the community. The University of Southern California School of Medicine extension courses on medical subjects were provided through the auspices of the medical society, so that the doctors of the community might keep abreast of modern trends in medicine. Activities of the medical society office, aside from major functions, included the writing of news releases, preparation of some advertising, the maintenance of a doctor-referral list, through which the residents of Kern County are being educated to call the medical society for reference to a doctor of medicine. A new orientation committee for the purpose of giving new doctors an insight into the purposes of organized medicine and an understanding of its activities in Kern County was activated. Many of the other committees—such as the new hospital committee for bringing a new hospital to Bakersfield and the admittance committee which screens all the new applicants for membership—met many times and accomplished much toward their objectives.

Officers of the medical society during this year of activity were Frederick O. Wynia, president, and John J. Cawley, secretary-treasurer. Elected to office for the year 1949 were Robert A. Patrick, president; John J. Cawley, vice-president; S. W. Iseminger, secretary-treasurer; and to the board of directors, elected as new members, were John E. Vaughan and Frederick O. Wynia.

It is believed that the year 1949 will determine finally whether or not the full-time medical society office and its economics council can be permanently supported by a small society. The need for such an activity is well recognized in Kern County, as in addition to its contribution to

the national effort against socialized medicine, there are always one or more acute local problems requiring the all-out effort of the society.

S. W. ISEMINGER, *Secretary*

Santa Barbara County Medical Society

The Santa Barbara County Medical Society now comprises a total of 149 members. Twenty-three new members were elected during the year 1948; nine members transferred elsewhere. The death toll was unusually heavy this year with five members succumbing, namely Wm. D. Samson, Harry L. Schurmeier, Wm. J. Mellinger, Paul Scott Hansen, and Jerome G. Schnedorf.

Our meetings are held at 8 p.m. on the second Monday of the month at Bissell Auditorium. The panel of speakers at our monthly meetings included such distinguished men as Drs. Karl F. Meyer, John Cline, Frank L. Gerbode, J. Norton Nichols and Joseph G. Rushton.

One of the highlights of the year's activities was the postgraduate seminar on December 4. A fine panel of speakers was supplied by the California Medical Association Committee on Postgraduate Activities, including Drs. Myron Prinzmetal, Clinton H. Thienes, Lewis T. Bullock, Ralph E. Homann, Jr., and Lewis F. Ellmore. San Luis Obispo and Ventura counties were welcome guests at this meeting.

The Cancer Commission of C.M.A. presented a valuable program of the diagnosis and treatment of various forms of this disease. The evening session was followed by a dinner at Montecito Country Club. The members greeted these scientific programs with lively enthusiasm and the hope for the future is that we have more of this form of education brought to us.

The medical library of Santa Barbara County Medical Society continues to thrive and our members are truly proud of this institution. An additional money grant enabled the society to open a branch library at St. Francis Hospital. We have established a library memorial fund to which donations may be given in memory of a deceased member in lieu of flowers. This plan is quite satisfactory and the memorial contribution has a permanent place in perpetuating the library.

During the year 1948 detailed biographies were obtained and our files are now almost complete with information about each of our members.

The ever-growing S.B.C.M.S. now looks forward to a successful and interesting year in 1949 under the guidance of our new president, Rodney F. Atsatt, and President-Elect Albert H. Elliot. Other officers elected at the December meeting were: vice-presidents at large, A. M. Beekler and L. H. Streaker; secretary-treasurer, D. F. McDowell; delegates, H. E. Henderson (2 years), A. B. Wilcox (1 year), D. F. McDowell (1 year); alternates, R. W. Lambuth (2 years), Max Hammel (2 years), D. H. McNamara (1 year); Council: Rodney F. Atsatt, J. Gary Campbell, Hugh F. Freidell, Lawrence E. Heiges, and David L. Reeves.

DOUGLAS F. McDOWELL, *Secretary*

FOURTH DISTRICT

Calaveras, Fresno, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne Counties.

Axcel E. Anderson, *Fresno, Councilor*

Fresno County Medical Society

The Fresno County Medical Society held eight regular scientific meetings, three special meetings, and one social meeting during 1948. Meetings were well attended and the scientific discussions by out-of-town speakers were well received.

Committees have been active, including those on cancer, blood bank, mental hygiene, draft board advisory, and history.

Nineteen applicants were elected to membership in the society.

The society employed an executive secretary on December 1.

C. S. MITCHELL, *Secretary*

Kings County Medical Society

During the past year the Kings County Medical Society has held monthly meetings except during the summer months. The attendance has been very good.

VIRGINIA M. COBB, *Secretary*

San Joaquin County Medical Society

The San Joaquin County Medical Society has completed a successful year in 1948 under the leadership of Dr. Edmund P. Halley.

Several projects of extreme importance to our members have been successfully concluded:

1. The local blood bank was opened early in 1948. Up to the present time it has never failed to supply blood when called upon. Much of the credit must be given to Dr. Don C. Harrington. He was untiring in his work when the bank was being established and has continued his active interest as representative of this society to the blood bank.

2. We were fortunate that Stockton was chosen for the regional meeting sponsored by the Cancer Committee of the California Medical Association. Arrangements for the meeting were made by the local cancer society under the leadership of Dr. J. O. Eccleston. Specialists from all parts of the country gave beautifully illustrated addresses on cancer as it affects various parts of the body. The meeting was well attended.

3. This was the tenth year of classes of the postgraduate study club. The lectures maintained their usual high standard. As in the past Dr. Charles A. Broaddus was chairman of the committee on arrangements. At the final meeting, Dr. Broaddus requested that some younger man take the burden from his shoulders. As a token of our gratitude for his ten years of outstanding service, Dr. Dewey R. Powell, acting on behalf of the society, presented Dr. Broaddus with a distinguished service key.

4. There has been continued agitation throughout the year for expansion of the medical facilities of the local Veterans Administration office. Our president, Dr. E. P. Halley, has taken an active interest in this program and has consistently tried to prevent the development of any program detrimental to the society. Up to the present no new medical appointments have been made and it seems possible that the whole program of expansion may be abandoned.

The following scientific programs were presented in 1948:

January 8—Psychiatric History Taking, Dr. Paul A. Griebe.

February 2—Blood Bank Program of the American Red Cross, Dr. Ross I. McIntyre; Blood Fractions, Dr. Foard T. McGinnis; Serum Albumin and Its Uses, Dr. David Rytand.

March 4—Industrial Hygiene and Occupational Diseases, Dr. Rodney Beard.

April 1—The Alleviation of the Fear of Childbirth—Dr. Carl Marsh.

September 2—Radioactive Isotopes and Their Clinical Application, Dr. E. P. Halley.

October 7—Cancer of the Cervix Uteri, Dr. A. Wilson Footer.

November 4—Alcoholism, Dr. Paul A. Griebe.

December 2—Dermatology in General Practice, Dr. Rees B. Rees, Jr.

There was a net gain in membership of 11, making a total of 134 members.

FRANK A. MCGUIRE, *Secretary*

FIFTH DISTRICT

Monterey, San Benito, San Mateo, Santa Clara, and Santa Cruz Counties.

Hartzell H. Ray, San Mateo, *Councilor*.

San Mateo County Medical Society

The present roster of this society shows 159 active members and 10 associate members. As president for 1949, Dr. Thomas Farthing replaces Dr. Harry Mason; in the secretaryship Dr. Ian Luke succeeds Dr. Logan Gray. Of particular significance relative to the increase of both the county's population and its medical activity is the fact that 26 candidates for Active Membership in the society have filed application during the past year.

The problem of bed-shortage has an outlook for solution in that construction is now going forward on the Sequoia Hospital in Redwood City, and the mid-county situation became more encouraging with the election of last November, when bonds were voted for the Peninsula Hospital.

IAN W. LUKE, *Secretary*

San Benito County Medical Society

The San Benito County Medical Society has been active during the past year with regular meetings held the first

Wednesday of each month at the Hazel Hawkins Memorial Hospital in Hollister. The year 1949 was started off with the election of Roswell L. Hull as president and John J. Haruff, secretary. Ralph E. Munson was elected to membership, making a total of seven members. Plans are being made to add educational features to our business meetings.

JOHN J. HARUFF, *Secretary*

Santa Cruz County Medical Society

Under the competent leadership of Dr. Philip K. Gilman, Jr., of Watsonville, this society enjoyed a very successful year. Six regular meetings were held at bi-monthly intervals. All meetings were dinner meetings. In January Dr. Don King of Stanford School of Medicine presented the general subject of Orthopedics. The March meeting had as speaker Dr. Victor Richards of Stanford School of Medicine, who discussed Medical and Surgical Conditions of the chest. In May the society was addressed by Dr. Frank Gerbode of San Francisco on the subject Peripheral Vascular Diseases. The July meeting had as speaker Dr. Windsor Cutting of Stanford School of Medicine, who discussed New Drugs. Dr. Paul Hattersley of San Francisco was with us in September and presented the subject of Anemia. The November meeting, which was also the annual business meeting, had as speaker Dr. Frederick Fender of Stanford School of Medicine, who discussed Intracranial Injuries.

SAMUEL B. RANDALL, *Secretary*

Santa Clara County Medical Society

During 1948 our society's activities have fallen into three main categories. They are:

1. Actions initiated by the organization for the medical benefit of the public.
2. Actions we initiate for the benefit of our own members; and,
3. Actions we became involved in by reason of programs other people or groups initiate.

Presented herewith is a thumbnail summary of current Santa Clara County Medical Society work and objectives segregated into the three different categories listed above:

Actions for the Medical Benefit of the Public—Carrying forth the project to develop the establishment of a local adequate emergency first aid hospital. The preliminary public education and publicity program on the project was keyed constantly to building a conviction that there was no question whatsoever regarding the absolute need for an emergency hospital. When final vote came before both city and county officials, only the methods of financing and the location of the site were the items discussed. During the year the public health committee ably conducted an industrial health survey covering 960 workers in local plants. The final results of the entire project are expected to be presented for publication soon in a national medical journal. Consolidation of our efforts in connection with the local blood bank were completed and, as a result, the constant availability of blood has been more regularly assured. An education program in connection with venereal disease treatment and care has been conducted, in cooperation with the county health department, throughout the entire year. Additional health education programs have been presented by the medical society with weekly radio programs over station KEEN. Twenty-six of these weekly broadcasts were dramatic presentations staged by drama school students from San Jose State College. Since midsummer, the programs have been transcriptions supplied by A.M.A. All have pointed steps to better health. The society has continued to make known its guarantee to fulfill any unmet medical need found to exist in this county. (Medical needs do not include hospital service or drugs.) The known existence of the medical society office affords the public a place where it can seek authoritative and helpful health information. Despite the fact that incoming questions run the gamut from the ridiculous to the sublime, the answers given, nevertheless, have proved reassuring and helpful to the questioners. A recent article in a national women's magazine brought 13 inquiries in one day regarding the medical qualifications of five local obstetricians; an A.M.A. *Journal* article repeated in the *Mercury Herald* created a series of inquiries which persisted for a week after the article appeared. These are but a few items cited as samples of year-round service.

Actions for the Benefit of Our Own Members—The Society's American Mutual malpractice insurance and claims prevention program inaugurated on January 19 this year is perhaps the most dramatic illustration of both the ability and the value of members' cooperating in such a

program. This new insurance, now in operation in Alameda (where it began), San Francisco, Santa Clara and Contra Costa counties, is the first of its type in the nation. It is a prevention program which combines group coverage with experience rating. It places greatest emphasis on the prevention of malpractice claims by eliminating their causes through an intensive program of education, and by attempting to meet specific claims at their immediate onset, instead of waiting until they might culminate in a court summons. This insurance is offered to members strictly on the basis that it affords them greater protection. Enrollment continues high in the society's group health and accident plan. Until this society's plan came into existence, only one other medical group had insurance that provided more than one year's coverage for sickness. Our plan provides coverage for two years. Six of our members this year were receiving indemnity payments for periods varying from two to twelve months. More than 60 per cent of our members and their families are enrolled in our Blue Cross hospital insurance. Benefits to members by participation in our Bureau of Medical Economics are well known. Cash savings over commercial rates exceed \$6,000 for this year alone. Aids for the doctor's use right in his own office added further to his financial gains as a member of the bureau. The informative article, "Why Patients Don't Pay," published by the bureau in the July issue of our county bulletin, has been copied by 16 state and county bulletins, plus *Medical Economics*. Other aids afforded society members include special time-saving insurance claim forms; "new patient" registration forms; special C.P.S. indemnity-type billing forms; library facilities; and answers to an average of seven questions per day from doctors' offices. Our committed chairmen have taken advantage of special educational facilities to provide programs for our members. One such program, which deserves additional special note, was the symposium on cancer conducted on April 24. Steps toward incorporation of the organization were begun. Special study was made of the possibility of the society owning, building or buying a building of its own.

Miscellaneous Actions—There seemed no end of participation in activities which were not begun or initiated by the society but which proved most time-consuming. In general, they included constantly combatting the encroachment by tax-supported and lay agencies upon the field of private medical service in instances where medical indigency is not a consideration. We engaged, in accordance with local conditions, in helping reduce the instances where medicine was being practiced by profit and non-profit corporations and hospitals. We did our part in the surveillance of rebating and fee splitting which came in for much statewide publicity and consideration last spring. Further time was spent in cooperating, through the aid of our public legislation committee, to carry out locally the legislative interests of our state association; in taking action regarding certification of crippled children fund cases; in studying and sanctioning, in cooperation with San Mateo County Medical Society, a contract proposal for medical care for the Menlo Junior College students; in evaluating and advising interested parties regarding the merits or demerits of certain locally proposed medical and hospital ventures; in appointing doctors to serve on three local draft boards; in assisting the district attorney's office in setting up a panel of doctors to serve in sobriety tests; in campaigning to elect our member, Stanley Kneeshaw, to the high post of President of C.M.A.—the first such election from a "cow county" in many years!

RICHARD O. PFAFF, Secretary

SIXTH DISTRICT

San Francisco County.
Edwin L. Bruck, San Francisco, Councilor.

San Francisco County Medical Society

Nineteen forty-eight was the eightieth anniversary of the San Francisco County Medical Society, and the twentieth anniversary of its monthly bulletin. It was also one of the most constructive years in the society's history for the individual members, as well as for the profession.

Press and public relations were greatly strengthened during the year due to the fine work of the committee on publicity. Dinner meetings were held with representatives of the San Francisco newspapers, the news services, the San Francisco hospitals, the schools of medicine of the two universities, and the society.

At these meetings, the problem of medical news for lay consumption was discussed, and a plan was adopted

whereby editors of newspapers and managers of news services could secure accurate information from the society's news bureau directed by the executive secretary. The effects of this meeting were evidenced immediately by the marked improvement in the relations between the doctors, the hospitals, the society, and the press.

The society's library was finally disposed of to the medical schools of the three California universities, and their appreciation was expressed many times in the bulletin.

The membership stood firm on the health service system resignations, and the society was not called upon to act as agent for its members during the latter part of the year. In the early months, efforts were made to effect settlements, but without success. Later on, the emphasis shifted from the society to the controversy between the retirement system board and the H.S.S.

The general practice section was started. The scientific meetings were better attended in 1948 than in the previous year. There were worthwhile programs in all the sections. The one joint meeting of the medical and surgical sections was well liked, and the panel discussions of the general meeting were particularly well received. The eye, ear, nose and throat section reorganized into two sections—one for eye and the other purely ear, nose and throat subjects.

The Bureau of Medical Economics again demonstrated its value in bettering the economic relationships between patients and physicians. The membership of the society responded in a most admirable manner to an appeal to join and support the bureau as a means of furthering good public relations.

The Woman's Auxiliary manifested its unique worth as an ally in all the society's activities.

The society is playing an important part in community preparation for disaster, and five members are on the central committee.

Consistent improvement was made in the bulletin. In March, the twentieth anniversary issue was published, representing the largest single issue in the bulletin's history.

During the past year, the health education committee conducted a health seminar for school teachers, in cooperation with the San Francisco District Dental Society, the San Francisco Unified School District, and San Francisco State College. There were 75 school teachers in the course, 26 of whom are receiving college credit, in addition to credit for in-service training, which is accorded to all school teachers taking the course. The speakers in the course have been various members of the society and the district dental society, and others who are specialists in associated medical fields. This course is being carried on in 1949 also.

The health education committee also arranged with radio station KFRC to give the A.M.A. series, "Before the Doctor Comes."

The medical service committee has been active in interviewing the San Francisco civil service medical employees, and studying the various phases of their activities pertaining to a desired salary raise by the civil service commission, and then recommending the raise.

Representatives of the San Francisco County Nurses Association and the nursing profession advisory committee of the society met several times to discuss the shortage of nursing power. A course is now being given under the direction of the unified school district to train "licensed practical nurses" known as "L.P.N." Minimum requirements are two years of high school education, age range 17 to 50 years, length of course one year, to include six months (two semesters) of classroom instruction and six months' hospital experience. Legislation is being prepared to license these practical nurses.

The California Physicians' Service committee of the San Francisco County Medical Society has been named by the Board of Trustees of C.P.S. to be a review committee for that body.

The professional conduct committee of the society considered 67 cases of various natures falling into several general categories: of fee disputes which numbered 29; malpractice suits, 16; questions on advertising, 6; matters of unethical conduct, 12; complaints against hospitals, 2; complaints against undertaking firms, 1; and special investigation, 1.

The professional conduct committee reported that most of these complaints could be avoided by: (1) amiable and frank relations with the patient, plus a willingness to sit down and discuss the issue at hand, and (2) knowledge of the Principles of Professional Conduct as set forth in the Constitution and By-Laws. The committee also reported that in its opinion the actual number of malpractice suits filed and the potential for the filing of suits is

greatly increased, and that the sums of money sued for have increased to an alarming degree, commonly ranging in excess of \$100,000.

The San Francisco branch of the American Cancer Society continues to account for a large part of the activities of the Society's cancer commission. As in previous years, the members are on the board of directors, and three members are on the executive committee of the local branch.

The society rendered a patriotic duty in cooperating with Selective Service, appointing medical advisors for draft boards and consultants in specialties.

Through the special service fund committee financial assistance was given to four veteran-members of the society. That the fund is still serving a useful function is obvious from the fact that calls are still being received asking for aid; and it is possible, with rising costs, that in the not too distant future there will be increasing rather than decreasing requests.

During the year 1948, the San Francisco County Medical Society lost 18 members by death.

In pursuance of plans suggested in the last annual report the committee on industrial health held several meetings, with the purpose of organizing a program of post-graduate training in industrial health. It is earnestly hoped that this project can be brought to a successful conclusion in the near future.

The committee on admissions recommended 131 new members to the board of directors for admission into the society, an increase in membership of slightly more than 10 per cent over the total 1947 membership.

The society's minifilm examining unit for chest x-rays was established September 1, as a trial project for six months. The purpose of the unit is to conduct a survey on apparently healthy persons in the City of San Francisco, and in time to make certain that the entire population has been x-rayed. This program is being handled in collaboration with the San Francisco Tuberculosis Association.

The blood bank continued to grow and proved a most valuable public relations asset. The total number of donors was 23,420, an increase for the year of 13.4 per cent.

A group malpractice insurance plan was initiated offering the best coverage available at the lowest premiums, and a group accident and health plan was started to protect earning power during disabilities caused by illness or accident.

A hearing center committee was established to represent the eye, ear, nose and throat section for the purpose of aiding and advising the San Francisco Hearing Society in the conduct of a hearing center. The committee set up a fee schedule for private, semi-private and clinic patients. It also met with representatives of the hearing aid dealers with the result that latest-model instruments have been loaned to the center by the local distributors of almost every A.M.A. accepted aid.

The hearing society, a lay group, is an agency of the community chest. It raised the funds to equip and operate the hearing center but looks to the committee of otologists of the county medical society for guidance and control of its operations.

What makes the San Francisco County Medical Society work smoothly is the devotion to their duty of the chairmen and members of these various committees. The accomplishments this year were the result of projects started in previous administrations, and the continued excellent teamwork displayed by the members as well as the officers and directors of the society.

M. LAURENCE MONTGOMERY, *Secretary*

SEVENTH DISTRICT

Alameda and Contra Costa Counties.
Donald D. Lum, *Councilor.*

Alameda County Medical Association

The Alameda County Medical Association is meeting its responsibilities to the profession and the public through the following activities, programs, projects, and agencies:

Public Service—Active fee complaint committees, the existence of which is advertised to the public.

An unconditional guarantee of medical care to everyone in the county regardless of inability to pay, which is repeatedly advertised to the public, and which is backed by the association's Bureau of Medical Economics, a new social service department with a qualified medical social service worker at the headquarters office, the "part-pay plan" of the association in cooperation with Dr. Otis Whitecotton, medical director of the County Institutions Commission, the uncompensated work of members of the

association in county institutions, but primarily by the fact that our members apply to their own practices the principle of medical ethics which places the interest of the patient ahead of financial remuneration.

A 24-hour telephone answering service for providing doctors in emergencies, which service is advertised under the heading "Physicians and Surgeons" in the telephone directory.

Constantly rising standards of practice in approved hospitals.

A militant ethics committee.

The operation of a blood bank which supplies whole blood to the entire community immediately upon request of the physician without any prior arrangement as to replacement or payment for processing charges.

Promotion of voluntary health insurance plans.

Other activities and projects in child health, industrial health, public health, organization for disaster relief, liaison with lay organizations interested in cancer, tuberculosis, heart, etc., control of quacks and irregulars, etc.

Service to Members—Services to members include a malpractice insurance program which is cutting down the incidence of malpractice suits and has reduced the cost of malpractice to less than half; a health and accident insurance program which provides five years of \$250 monthly indemnities at low cost; ethical collection service through the Bureau of Medical Economics; medical social service consultation for members; office management consultation service; outstanding scientific programs which attract the attendance of more than 500 of our members; credit reporting; an excellent library, and so forth.

The association has budgeted in excess of \$15,000 for publicity on its public service program during 1949.

The association and its agencies now have in excess of 40 full-time lay employees. Dues are \$40 for active members, which are returned to members many times in savings on malpractice and health and accident premiums, credits, collections, and other services. The greatest increment to us from our investment of time and money in our accelerated program, however, is our improving public relations as indicated by the decrease of malpractice claims, a decrease in the number of delinquent medical accounts referred for collection, the absence of response to our repeated advertisements in the public press for complaints against members who are guilty of overcharging or other unethical conduct, and the maintenance of the most priceless ingredient of good medical practice in a community—good feeling and the absence of cliques and factions within the profession itself, in spite of our having increased our total membership to nearly 1,000.

The Alameda County Medical Association believes that it is justified in its pride in the contribution it has made to the legislative, economic, public relations, and scientific achievements of California medicine.

DOROTHY M. ALLEN, *Secretary*

EIGHTH DISTRICT

Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo, and Yuba Counties.

Wayne E. Pollock, Sacramento, *Councilor.*

Yolo County Medical Society

The Yolo County Medical Society held regular monthly dinner meetings during 1948 except for the summer months. Recent findings in medicine and related fields were brought to the group through prominent speakers from various parts of California.

In January a cancer clinic was held at Yolo County Hospital through arrangements made by the county cancer committee of the society.

New members admitted during the year are Drs. Charles L. McKinney, Neil D. Elzey, Kayle Fawcett and Thomas Y. Cooper.

CHARLES L. MCKINNEY, *Secretary*

Yuba-Sutter-Colusa Counties Medical Society

The destinies of our society were guided in 1948 by our only woman physician, Dr. D. Emorine Edwards.

Nine regular meetings were held.

January: a cancer symposium by the Public Health Department, which presented a highly educational evening.

February: A business meeting, relating primarily to the local situation. It was voted to reimburse the delegate and alternate for the expenses of attending the C.M.A. annual meeting, to the extent of \$75.

March: "Urology for the General Practitioner" was the theme of the evening lecture.

April: Delegate and alternate gave a detailed report of the C.M.A. Convention. The society again went on record: That the courtesy of free examination be extended to all organizations that provide summer camp vacations in this community. These examinations were made by the family physician.

May: Dr. Ralph C. Burson and Dr. Edmund W. Overstreet of the University of California Medical School gave a detailed presentation on analgesics in childbirth including caudal analgesia.

June: A motion picture, "Postencephalitic Parkinsonism—Signs, Symptoms, and Therapy of the Disease," was shown.

October: Dr. Edwin H. Lennette, chief of the Viral and Rickettsial Disease Laboratory of the California Department of Health, outlined laboratory procedure.

November: Annual society banquet held at Riverside Hotel, Colusa. Guest speaker: Dr. Frances Cox—Fractures of Wrist and Ankle.

December: Wayne E. Pollock, M.D., Councilor for the Eighth District, accompanied by Dr. Frank MacDonald, presented the political situation on the state and national level.

Four new members were elected during the year.

LEON M. SWIFT, *Secretary*

Sacramento Society for Medical Improvement

Organized in 1868, the Sacramento Society for Medical Improvement has enjoyed steady growth. The society now has over two hundred members, many of whom are active in local and state medical affairs. Meetings are held monthly, at which time speakers, usually from the medical schools in San Francisco, aid in keeping us informed of recent developments. An annual banquet is held March 17, and the December meeting is devoted to election of officers. A history of the society is now in preparation.

EDMUND E. SIMPSON, *Secretary*

NINTH DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma, and Trinity Counties.
John W. Green, Vallejo, Councilor.

Marin County Medical Society

The Marin County Medical Society made a satisfactory showing in 1948. The present membership has reached 71, and several new members will probably come in soon. One member died and one transferred out of the county.

Nine monthly meetings of the society were held. All were well attended and worthwhile subjects were adequately treated in every case.

The old constitution and by-laws had become out of date and a new one was written, revised and accepted. The society is now functioning smoothly under a newly elected board of directors.

Obstetrical cases continue to keep the maternity beds full. The use of Hamilton Field Hospital for such cases has helped to relieve the strain on the other two hospitals.

All the medical specialties are now well represented and seem to be doing a satisfactory job in caring for the needs of the county.

CARL W. CLARK, *Secretary*

Mendocino-Lake Medical Society

At the annual meeting of the Mendocino-Lake County Society held at Willits, the officers for 1949 were elected, the president-elect being Dr. E. C. Bennett of Ukiah, secretary-treasurer Dr. Robert B. Smalley of Willits. Dr. Clemens M. Bell, Upper Lake, was elected delegate, with Dr. E. C. Bennett as alternate.

Because of the increased size of the society, it was decided to have monthly meetings except for June, July and August, instead of the quarterly meetings.

ROBERT B. SMALLEY, *Secretary*

Napa County Medical Society

Nineteen forty-eight was a good year for the Napa County Medical Society. Due to the return of men from the armed services and others shifting locality, as in the case of those looking for a better location, our membership increased from 44 to 50.

Dr. Walter Brignoli of St. Helena developed into a first-class president and succeeded in having interesting meetings throughout the year.

Our November meeting was held as usual at the Veterans Home where each year the local doctors are welcomed as guests of the home with Colonel Holderman, commandant, and the medical staff entertaining the profession in their fine hospital. At this meeting the annual election of officers was conducted. Dr. M. M. Booth of St. Helena was elected president and Dr. Robert Starr Northrop of Napa secretary. Dr. D. H. Murray was named delegate with Dr. Harry V. Baker as alternate.

With the increase in membership which the past year has shown it is the hope of the society that we will qualify for an additional delegate during the coming year.

ROBERT STARR NORTHRUP, *Secretary*

Sonoma County Medical Society

Membership of the Sonoma County Medical Society at the end of December 1948 was 84 with eight new members acceptable for membership January 1, 1949. During the year of 1948, 14 new members were accepted. Two members were deceased and three members were transferred.

Ten meetings were held during the year with average attendance of 45 members.

A seminar on "Nonmalignant Gastro-intestinal Disorders and Treatment of These" was held June 18 at the Sonoma County Hospital in Santa Rosa for the members of the Sonoma, Marin, Napa, Mendocino and Lake County societies. This was under the direction of Carroll B. Andrews, M.D., chairman of the C.M.A. Postgraduate Committee.

One of the important undertakings of the society during the year was the sponsorship of a community blood bank for the County of Sonoma. The members voted to underwrite this project with \$8,000 on the basis of a \$100 loan from each member. Local clubs and organizations and individuals lent their support to this, and the Leghorns Ball Club from Petaluma has extended \$2,000 to the blood bank.

William N. Makaroff is chairman of the blood bank committee.

RAIMOND F. CLARY, *Out-going Secretary-Treasurer*